

**THE PSD VARIANCE ISSUE
IN NORTH DAKOTA**

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Executive Summary

North Dakota is one of only a few states that have addressed and used what Congress anticipated would be one of the most important provisions of the Clean Air Act (CAA) – the provisions relating to considering air quality related impacts from new and existing sources in Class I areas. This document describes and discusses the law, the legislative history, and the history of application of the provisions of the CAA § 165(d)(2)(C) & (D) in North Dakota. North Dakota is the only state that has existing and active Federal Land Manager (FLM) alternate Class I variances issued under CAA § 165(d)(2)(C)(iii). The two facilities currently operating under these FLM alternate variances are the Dakota Gasification Company (DGC) that operates near Beulah, North Dakota, in the central part of the state, and the Little Knife Gas (Little Knife) plant, that operates in the west-central part of the state.

This analysis discusses CAA § 165(d)(2)(C) & (D) in detail because the issues cannot be adequately understood without this background. Further, because these are unique North Dakota issues, the State has access to files and documents that are relevant to this issue and its application in North Dakota.

This executive summary gives a summary of each section and what it concludes.

Section 1.0

This section gives a short summary of some important aspects of the PSD law relevant to CAA § 165(d)(2)(C) & (D) and the role that states are intended to play under that law.

Sections 2.0-2.5

These sections discuss the history of the PSD program in North Dakota, and the energy boom that was occurring in the state as the PSD law was being enacted and developed in the 1970's and early 1980's. It also discusses the numerous FLM certifications issued by the Department of the Interior for North Dakota facilities, and the process and procedure the Department of the Interior developed to apply to these types of proceedings.

It examines the FLM certifications and their interpretation when they were granted and concludes that the alternate class I SO₂ 3-hour and 24-hour increments (3-hour – 325 ug/m³, 24-hour – 91 ug/m³) were intended as the maximum *ceiling* Congress established for deterioration of air quality in all class I areas from sources that are given FLM certifications. The class I 3-hour and 24-hour SO₂ increments (3-hour – 25ug/m³, 24-hour 5 ug/m³) apply in all cases and to all facilities *except* facilities such as DGC and Little Knife to which an FLM certification or variance has been given. But as noted in the FLM certifications for those facilities, the certifications do not allow impacts all the way up to the alternate “ceiling” (*i.e.*, the alternate increment), but only up to the levels considered in the FLM certification – which in 1982 FLM certification for Theodore Roosevelt National Park (TRNP) and Lostwood Wilderness Area (LWA) was “[t]he predicted concentrations (modeled estimates plus monitored concentrations).” Because these determinations are fact-specific and related to the actual physical and biological conditions in the park, they must always be reviewed and determined on “a case-by-case basis”.

As stated in the Interior Department's 1982 notice of procedure quoted above, “[i]f the Federal Land Manager of the class I area determines that a proposed facility will not adversely affect the class I area, then the permitting authority may authorize the facility even though the facility's emissions may cause a violation of the class I increment.” However, in that situation, “the facility must, nevertheless, not exceed a revised set of class I increments established by

section 165(d)(2)(C)(iv) of the Act.)” But the FLM certification applies only up to the levels of pollution considered in the FLM certification. Because these determinations are fact-specific to the actual conditions in the park, FLM certification under Clean Air Act § 165(d)(2)(C)(iv) must always be reviewed and determined on a case-by-case basis.

Sections 3.0-3.2

These sections discuss the legislative history of CAA § 165(d)(2)(C) & (D) and language from the *Alabama Power* case that discusses “Protection of the Increments.”

It notes that the issue of whether to allow variances and FLM certifications of no adverse impact to the class I increments was a topic of considerable debate when Congress enacted the 1977 PSD amendments to the Clean Air Act. In the final version enacted by Congress, both the FLM and states are given important roles and authority to make such determinations. The Act provides that if, in the end, the FLM and the state cannot reach agreement on whether to give a FLM certification of no adverse impact or other variance, the president has the final say.

The 1977 Senate-House Conference Committee that drafted the final enacted language of Clean Air Act §§ 165(d)(2)(C) & (D) did not write a legislative report describing their intent. But based on the plain language enacted and the legislative history, however, it is clear that the following compromises were reached in the law as enacted:

- States retain their vital role described in the 1976 Senate floor debate, because each state’s governor retains an ability to disagree, and even trump, an FLM decision, subject to, essentially, a presidential veto;
- The 1977 House version of the law, H.R. 6161 (which took out all Class I variances altogether) was rejected;
- The 1977 Senate version of the law was adopted that (1) focused on Air Quality related Values (AQRVs) rather than the class I increment as the ultimate test, and that (2) allowed three different forms of variances to the Class I increments that are to be considered on a case-by-case basis;
- Congress set alternate Class I increments for FLM certifications of no adverse impact, and a second set of alternate Class I increments for either a governor’s or a presidential variance; and
- Even though the House’s version of the bill (taking out Class I variances altogether) was not adopted, Congress altered the size when national parks become mandatory Class I areas (making them smaller so more national parks and wilderness areas qualified), and the AQRV test was made to apply “[i]n any case.”

In sum, Congress rejected the House version of the PSD amendments to the Clean Air Act that would not have contained any Class I variances. Instead Congress enacted a modified version of the Senate’s 1977 bill that (1) allowed FLM certifications and variances to the class I increments to be given under specified circumstances, (2) set alternate increments as a second “ceiling” that may not be exceeded, and (3) made AQRVs the underlying concern when considering the possible impacts of a proposed new source on a mandatory class I area. In this final enacted version, Congress established a process that:

- requires notice to the FLM in “any case” that may impact a Class I area;
- gives the FLM first say in whether to allow a Class I variance;
- gives the state’s governor authority to allow a Class I variance if he disagrees with the FLM’s decision; and
- gives the president final say if the state and the FLM cannot then agree on whether a variance is appropriate.

With regard to the *Alabama Power* case, this analysis concludes that after construing the 1977 PSD amendments to the Act as a whole, and considering their context and legislative history discussed in the other sections of this document, the language from *Alabama Power* at issue cannot reasonably be construed in the context of the rest of the Act as requiring offsets from baseline sources and increment consuming sources for any increased emissions from a source given an alternate FLM Class I increment certification of no adverse impact.

4.0 Conclusion

The most reasonable construction of the PSD statutes, its legislative history, and its history of application in the North Dakota FLM certification proceedings discussed in section 2.4.2, is that SO₂ emissions from Little Knife and DGC consume increment against the alternative Class I increment under CAA § 165(d)(2)(C)(iv) and N.D. Admin. Code § 33-15-15-01(4)(j)(4)(b), but not against the Class I increment under CAA § 163(b)(1).

The PSD Variance Issue in North Dakota

The Prevention of Significant Deterioration (PSD) program is one of the more complicated provisions of the Clean Air Act. North Dakota is one of only a few states that have addressed and used what Congress anticipated would be one of the most important provisions of the Act – the provisions relating to considering air quality related impacts from new and existing sources in Class I areas.

The Interior Department (the federal land manager (FLM) for national parks) developed regulations and issued several important sets of findings and determinations relating to Theodore Roosevelt National Park (TRNP) and Lostwood Wilderness Area (LWA) in North Dakota in the early 1980's.

The purpose of this document is threefold:

- To summarize background facts and history underlying the FLM variances that were issued in North Dakota;
- To discuss the FLM North Dakota variances in this context; and
- To summarize the legislative history and law relating to Congressional intent and the reasons why the PSD variances were developed in order to appropriately apply them to North Dakota's issues and circumstances.

1.0 Summary of Federal PSD Program Enacted by Congress

In addition to the primary and secondary national ambient air quality standards (NAAQS), which protect public health and welfare, in 1977 Congress passed an amendment to the Clean Air Act (CAA) to protect air quality from significantly deteriorating in areas like North Dakota where the air quality is better than the NAAQS – the “Prevention of Significant Deterioration of Air Quality” program – a program that has come to be known by its acronym, “PSD”.¹

The NAAQS are set and modified by EPA based on scientific studies of when levels of various pollutants in the air begin to impact sensitive groups of people, plants, animals, buildings, and other receptors. In clean air areas where the NAAQS are in “attainment,”² Congress and EPA established levels of allowable deterioration for each of the criteria pollutants largely as a matter of policy rather than science.³

¹ Part C of Subchapter I of the Clean Air Act, CAA §§ 160-169B, 42 U.S.C. §§ 7470-7492.

² Specific statutes and rules apply to areas of the United States that are not in attainment of the NAAQS, called “non-attainment standards.”

³ John Quarles, the acting administrator of EPA when EPA promulgated the 1974 PSD regulations in response to a lawsuit, testified in a House hearing in 1981 that:

“[The Class II increment] was simply plucked off the ceiling at the time that EPA was developing the program, and Congress wrote it into the statute in 1977. There is no way you could relate that increment or any other increment to any health effect or welfare effect or any identifiable effect of any sort.”

Craig N. Oren, *Prevention of Significant Deterioration: Control-Compelling Versus Site-Shifting*, 74 Iowa L. Rev. 1, 24, FN 86 (1988). See also 39 Fed. Reg. 31000, 31001(August 27,1974) (calling where the PSD increments were established by EPA a “subjective decision”).

For sulfur dioxide (SO₂), for example, Congress set each class II “increment” of allowable deterioration for most of the country at approximately one-fourth (1/4) of the annual, 24-hour, and 3-hour SO₂ NAAQS.⁴ Congress allowed states either to redesignate these areas to allow deterioration of air quality up to approximately one-half (1/2) of the SO₂ NAAQS (class III redesignation), or to redesignate these areas to allow very little deterioration (class I redesignation).⁵

Congress reserved to each state a considerable amount of discretion in managing these allowable “increments” of air quality deterioration. Congress gave each state authority to do the following:

- Designate⁶ (and redesignate when appropriate)⁷ the size and location of the various PSD air quality management regions or areas within its borders;
- Redesignate PSD air quality management regions from class II to class III, when a state determines that it wants to allow more deterioration in an air quality management region than allowed by Congress’ original class II designation, or redesignate PSD air quality management regions from class II to class I, when a state determines that it wants to allow less deterioration in an air quality management region than allowed by Congress’ original class II designation;⁸
- Consider major source preconstruction applications, make permitting decisions, and determine the best available control technology (BACT) for new major emitting facilities and existing facilities undergoing major modifications;⁹
- Establish the baseline concentration by monitoring ambient concentration levels, and by making adjustments to the monitored baseline ambient concentration levels with computer modeling, after taking into account projected emissions from a source that had commenced construction but not begun operation by January 6, 1975, as well as actual emissions after the baseline date if a source can demonstrate that its operation after the

⁴ The class II SO₂ increments (in micrograms per cubic meter) are: annual – 20; 24-hour – 91; and 3-hour – 512. Clean Air Act § 163(b)(2), 42 U.S.C. § 7473(b)(2). Clean Air Act § 162(b), 42 U.S.C. § 7472(b) designates all of the United States class II, except for the national parks and national wilderness areas designated Class I. A summary of the legislative history that made the 3-hour SO₂ standard more than ¼ of the 3-hour SO₂ NAAQS is at “Legal Issues relating to PSD Baseline and Increment Consumption,” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 2, pages 40-42, Hearing Record (hereafter “HR”) pages 49-51. This discussion of the legislative history and other matters is posted by EPA Region 8.

See <http://www.epa.gov/region8/foia/ndair/ndair.html#legal>.

⁵ *Id.* The original three classes of increments for SO₂ and particulate matter were set by Congress, rather than EPA, at Clean Air Act § 163(b), 42 U.S.C. § 7473(b). Congress gave states the authority to redesignate areas and classes at Clean Air Act § 164(a), 42 U.S.C. § 7474(a). For criteria pollutants other than SO₂ and particulate matter, EPA sets the increments. Clean Air Act § 166(a), 42 U.S.C. § 7476(a).

⁶ Clean Air Act §§ 107 & 161, 42 U.S.C. §§ 7407 & 7471.

⁷ Clean Air Act § 164(a); 42 U.S.C. § 7474(a).

⁸ Clean Air Act § 164(a); 42 U.S.C. § 7474(a).

⁹ Clean Air Act § 169(1)-(3), 42 U.S.C. § 7479(1)-(3).

baseline date is more representative of normal source operation than its operation preceding the baseline date;¹⁰ and

- Participate in proceedings that make adjustments in application of the class I increments in mandatory class I areas based on air quality related values after scientific studies are done, public hearings are held, and determinations are made by the state's governor and the federal land manager, or, if they cannot agree, by the president.¹¹

Congress made national wilderness areas larger than 5,000 acres, and national parks larger than 6,000 acres, mandatory class I areas that cannot be redesignated.¹² Since LWA (a national wilderness area larger than 5,000 acres) and TRNP (a national park larger than 6,000 acres) fit into these two categories, they are mandatory class I areas that cannot be redesignated.¹³

In 1977, Congress set the "the maximum allowable increase in concentrations of sulfur dioxide ... over the baseline concentration" (commonly referred to as the class I increments for SO₂) as follows for these mandatory class I areas:

- Annual mean, 2 micrograms per cubic meter (.77 ppb);
- 24-hour maximum, 5 micrograms per cubic meter (1.92 ppb); and
- 3-hour maximum, 25 micrograms per cubic meter (9.54 ppb).¹⁴

Congress determined that it would allow the 24-hour and 3-hour increments each to be exceeded once per year.¹⁵

Congress also provided for the following alternative maximum allowable increases over the baseline concentration of SO₂ after certification by the federal land manager that the increased emissions from a facility will have no adverse impact on air quality-related values:¹⁶

¹⁰ N.D. Admin. Code § 33-15-15-01(a)(1); 40 C.F.R. § 51.166(b)(21)(ii); 40 C.F.R. § 52.21(b)(21)(ii); 45 Fed. Reg. 52675, 52714 (August 7, 1980); *Alabama Power Co. v. Costle*, 636 F.2d 323, 372, 381, 387 (D.C. Cir. 1980); EPA's *Prevention of Significant Deterioration Workshop Manual* (October 1980).

¹¹ Clean Air Act § 165(d)(2)(C) & (D), 42 U.S.C. § 7475(d)(2)(C) & (D). Craig N. Oren, "The Protection of Parklands from Air Pollution: A Look at Current Policy," 13 Harv. Env't'l Law Rev. 313, 374-81 (1989), discusses the legislative history relating to this provision in some detail, and concludes, *Id.* at 381, that "[W]hile the Federal Land Manager has the affirmative responsibility to protect air quality related values, 'the final decision still rests with the State.'" Although the final version of the bill gave the president authority to override the air quality-related value determination of the state's governor, between the federal land manager and the governor, the governor retained the final say in determining air quality-related values as shown by Oren's discussion of this provision's legislative history. *Id.* at 374-81; Clean Air Act § 165(d)(2)(D)(i) & (ii), 42 U.S.C. § 7475(d)(2)(D)(i) & (ii).

¹² Clean Air Act § 162(a)(2) & (4), 42 U.S.C. § 7472(a)(2) & (4).

¹³ *Id.* Technically, on August 7, 1977, TRNP was a national memorial park larger than 5,000 acres covered by Clean Air Act § 162(a)(3), 42 U.S.C. § 7472(a)(3), rather than a national park. On November 10, 1978, the park was given national park status when President Carter signed Public Law 95-625 that changed the memorial park status to Theodore Roosevelt National Park. See TRNP website at http://www.nps.gov/thro/tr_parkhist.htm.

¹⁴ Clean Air Act § 163(b)(1), 42 U.S.C. § 7473(b)(1).

¹⁵ Clean Air Act § 163(a), 42 U.S.C. § 7473(a).

- Annual mean, 20 micrograms per cubic meter (7.5 ppb);
- 24-hour maximum, 91 micrograms per cubic meter (35 ppb); and
- 3-hour maximum, 325 micrograms per cubic meter (125 ppb).¹⁷

Unlike other increments, these alternative increments cannot be exceeded even once per year.¹⁸ These alternative SO₂ class I increments are all exactly one-fourth (1/4) of the annual, 24-hour, and 3-hour NAAQS for SO₂.¹⁹

2.0 ND's 70's Energy Boom as Federal and State PSD Law Developed

The PSD provisions in the 1977 Clean Air Act amendments were enacted in response to a series of lawsuits. The Sierra Club filed a lawsuit in 1972 that was heard but not decided by the U.S. Supreme Court in 1973.²⁰ This resulted in more litigation that prompted Congress to enact the PSD law.²¹ The PSD provisions to the '77 Clean Air Act amendments immediately spawned additional litigation involving dozens of parties that lasted two more years in response to the rules EPA promulgated in 1978 to implement the new PSD law.²² This in turn spawned still more litigation relating to the amendments to the PSD rules EPA made in 1980 in response to the *Alabama Power* case that settled in February 1982 with an agreement by EPA to further revise its rules²³ – an agreement that EPA never kept.

At the same time that the initial rounds of PSD litigation, rulemaking, and legislation were occurring at the federal level between 1972 and 1982, North Dakota was undergoing a boom in the development of its large lignite coal reserves and oil and gas resources because of

¹⁶ Clean Air Act § 165(d)(2)(C)(iii), 42 U.S.C. § 7475(d)(2)(C)(iii).

¹⁷ Clean Air Act § 165(d)(2)(C)(iv), 42 U.S.C. § 7475(d)(2)(C)(iv).

¹⁸ Clean Air Act § 163(a), 42 U.S.C. § 7473(a).

¹⁹ See “Air Quality in North Dakota: Issues and Answers” document, footnotes 26, 32, and 33 and accompanying text. Still other alternative increments apply if the federal land manager does not certify there is no adverse impact, the state’s governor grants a variance anyway, and the federal land manager concurs or does not concur, then the alternative 24-hour and 3-hour increments at Clean Air Act § 165(d)(2)(D)(iii), 42 U.S.C. § 7475(d)(2)(D)(iii), apply, which allow these alternative increments to be exceeded on up to 18 days per year. If the federal land manager does not concur with the governor’s variance, the decision goes to the president. Clean Air Act § 165(d)(2)(D)(ii), 42 U.S.C. § 7475(d)(2)(D)(ii). See also at “Legal Issues relating to PSD Baseline and Increment Consumption,” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 2, pages 42-43, HR pages 51-52 (discussing late amendments to the 3-hour increments in the '77 CAA amendments establishing the PSD program).

²⁰ *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253 (D.D.C. 1972). This decision was affirmed without opinion by the D.C. Circuit. 4 Env’t Rep. Cas. (BNA) 1815 (D.C. Cir. 1972). The Supreme Court granted certiorari, heard oral argument, but then affirmed the decision without opinion with an equally divided court, Justice Powell not participating. *Fri v. Sierra Club*, 412 U.S. 541 (1973).

²¹ *Sierra Club v. EPA*, 540 F.2d 1114 (D.C. Cir. 1976). Both the Sierra Club and industry groups then petitioned for certiorari; the Sierra Club’s petition was denied, 430 U.S. 959 (1977), while industry’s petition was granted under the name *Montana Power v. EPA*, 430 U.S. 953 (1977), but limited to two questions, including the fundamental issue of whether the regulations were authorized by statute. Congress, though, elected to resolve the issue itself before the Supreme Court made its decision. After Congress acted, the case was vacated and remanded for reconsideration in light of the Clean Air Act Amendments of 1977, 434 U.S. 809 (1977).

²² *Alabama Power Company v. Costle*, 636 F.2d 323 (D.C. Cir. 1980).

²³ *Chemical Mfrs. Ass’n v. EPA*, No. 79-1112 (D.C. Cir. 1982).

(1) a growing regional demand for electricity in rural North Dakota and Minnesota relating to new technologies that required electricity for agriculture and industry (e.g., new agricultural processing facilities), and (2) the 70's energy crisis that prompted Congress to look for domestic energy replacements for what was perceived to be an over-dependence on Mideast crude oil controlled by OPEC.²⁴

Over this period, numerous North Dakota power plants and natural gas processing plants were in various stages of planning, permitting, building, and initial operation at the same time that the federal PSD law was developing and changing.

Several power plants that were in existence prior to the passage of the 1970 amendments to the Clean Air Act – Heskett Unit 1 (1954) and Unit 2 (1963), Leland Olds Unit 1 (1966), Stanton Unit 1 (1967), and Milton R. Young Unit 1 (1970) – received their permits to operate as pre-existing sources under the Act in June 1973.²⁵

Two other baseline sources – Leland Olds Unit 2 (startup in November 1975) and Milton R. Young Unit 2 (startup in March 1977) – were permitted before the major source baseline date, were in various stages of construction on the “major source baseline date” (January 6, 1975),²⁶ and were in various stages of initial operation on the “minor source baseline date” (December 19, 1977).²⁷

Twelve other major sources received permit applications from the Department of Health between September of 1974 and July of 1980, six of which were received before Congress enacted the PSD amendments to the Clean Air Act on August 7, 1977,²⁸ and all of which were received before EPA promulgated its amendments to the PSD rules after the *Alabama Power* case on August 7, 1980.²⁹ Nine of these twelve sources were constructed and operated.³⁰ And all but one of these nine built sources received their permits to construct between April 1977 and May 1979.³¹ The ninth facility that was constructed, Grasslands Gas, received its permit to construct in October 1980 after its startup date in April 1980 because it was given a variance to

²⁴ See, e.g., Thomas L. Zimney, *The Peril of Air Pollution in North Dakota*, 46 N.D. L. Rev. 217, 222-23 (1970)(discussing economic and industrial conditions in ND at the beginning of this period just as the first provisions of the Clean Air Act were being enacted).

²⁵ “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” footnote 27 “Air Quality in North Dakota: Issues and Answers” document, Table 4, document page 30, HR page 713. The minor source baseline date was triggered when the Little Knife Gas plant completed its application for a permit on December 19, 1977. *Id.* at page 29, HR page 712.

²⁶ Clean Air Act § 169(4), 42 U.S.C. § 7479(4); N.D. Admin. Code § 33-15-15-01(e)(1)(a).

²⁷ “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” footnote 27 “Air Quality in North Dakota: Issues and Answers” document, Table 4, document page 30, HR page 713.

²⁸ Pub.L. 95-95, effective August 7, 1977.

²⁹ See list of PSD increment-affecting sources, permit application received column, “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” footnote 27 above, Table 4, document page 29, HR page 712. The PSD rule amendments after *Alabama Power* were published in the federal register on August 7, 1980. 45 Fed. Reg. 52,675 (August 7, 1980). The *Alabama Power* decision was originally issued on December 14, 1979, then reissued in 1980. See *Alabama Power Company v. Costle*, 636 F.2d 323 (D.C. Cir. 1980).

³⁰ See list of PSD increment-affecting sources, date of startup column, “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” footnote 27 “Air Quality in North Dakota: Issues and Answers” document, Table 4, document page 29, HR page 712.

³¹ *Id.*, PTC Date (permit to construct date) column.

operate before its permit to construct was issued.³² These nine facilities all had startup dates (i.e., the date they began to operate after they were constructed) between July 1978 (Little Knife Gas) and October 1985 (AVS Unit 2).³³

In sum, all but one PSD increment consuming major source built and currently operating in North Dakota were originally permitted between April 1975 and May 1979 when the PSD rules and statutory law were being developed and enacted in the midst of considerable litigation and uncertainty. All nine of these PSD increment-consuming sources were finished and began operation between July 1978 and October 1985.

2.1 Technology Limitations ND Faced in Late 70's PSD Implementation

In addition to the rapidly evolving legal and regulatory framework that developed between 1972-82 and North Dakota's energy boom occurring during that same period, monitoring technologies capable of measuring very low concentrations of SO₂ (i.e., in parts per billion) did not become available until about 1980.³⁴ Computer memory and capacity, sophistication of computer programs and computer technologies, and available weather data to program into computers for use in modeling, also were limited in the late 70's.³⁵

2.2 ND's Modeled ND Class I 24-hour SO₂ Increment Completely Consumed in February 1978, Seven Months After PSD Law Enacted

The preamble to the first rules EPA promulgated after Congress enacted the PSD amendments to the Clean Air Act in August 1977 indicated that application of steady-state air quality models then in use were limited "to a downwind distance of no more than 50 kilometers."³⁶ This was "because dispersion parameters commonly in use [at that time were] based on experiments relatively close to sources, and extending these parameters to long downwind distances results in great uncertainty as to the accuracy of the model estimates at such distances."³⁷ EPA also indicated at that time that it did not intend "to analyze the impact of a source beyond the point where the concentrations from the source fall below certain levels (which are generally based on the Class I increments)."³⁸ EPA decided, however, that since "the 1977 Amendments provide special concern for Class I areas, any reasonably expected impacts for these areas must be considered irrespective of the 50 kilometer limitation or the above significance levels."³⁹

Almost all of North Dakota's major sources of SO₂, both in the late 1970's and in 2004, are more than 50 kilometers away from TRNP and LWA, and most of them are over 100

³² Id.

³³ Id.

³⁴ Attempts by the Department prior to 1979 to gather initial SO₂ concentration data in areas around the developing plants through use of monitors based on a gas "bubbler" technology were unsuccessful because the data from the monitors was determined to be unreliable. "A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota," document page 13, HR page 696.

³⁵ See discussion in next section.

³⁶ 43 Fed. Reg. 26,380, 26,398 (June 19, 1978). Different versions of these steady-state air quality models continued to be used by the Department to determine compliance with the Class II increment within 50 kilometers of the modeled source at least through 1992. See "A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota," Table 6, document page 33, HR page 716.

³⁷ 43 Fed. Reg. at 26,398.

³⁸ Id.

³⁹ Id.

kilometers from these areas.⁴⁰ But dozens of “minor sources” of SO₂,⁴¹ primarily oil and gas wells, are located within 50 kilometers of TRNP and LWA. These minor sources were located within a 50 kilometer radius of those areas in the mid to late 70’s and early 80’s when the practice was to flare natural gas off these wells at the wellhead, rather than collect it and process it at natural gas processing plants.⁴²

Since eight of these major sources, including several large power plants, were permitted and began construction between April 1977 and May 1979,⁴³ the issue of the impact of these major sources on the class I increments in class I areas more than 100 kilometers away arose.

In January 1978, only months after the ’77 PSD Clean Air Act amendments were passed, Basin Electric Power Cooperative submitted an air quality effects analysis that analyzed increment consumption using the only “guideline” steady-state model then available capable of calculating concentrations for multiple air pollution sources over short-term (24-hours or less) averaging time periods.⁴⁴ Using a year of weather data (1964), the Health Department’s analysis identified the day and the location in TRNP where the highest and second highest 24-hour concentrations of SO₂ would occur according to the steady-state model.⁴⁵ This modeling predicted a total Class I 24-hour SO₂ increment consumption at the high-second-high location (the most important number for short-term increment compliance) in the south unit of TRNP of 7.7 micrograms per cubic meter (ug/m³) – a result that was higher than the 5 micrograms per cubic meter (ug/m³) Class I 24-hour SO₂ increment set by Congress in August 1977.⁴⁶

Of the 7.7 micrograms of 24-hour SO₂ increment consumption calculated by the steady-state model in this January 1978 assessment, 3.7 micrograms per cubic meter of increment consumption were attributed to three sources for which PSD construction permits had already been granted – Coal Creek, Coyote and ANG.⁴⁷ The remaining 4 micrograms of increment

⁴⁰ See, e.g., “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” Figure 1, document page 36, HR page 719.

⁴¹ A “minor source” is a stationary source of air pollution that emits less than 100 tons of a regulated pollutant per year that would make it a major source. Clean Air Act § 169(1), 42 U.S.C. § 7479(1); N.D. Admin. Code § 33-15-15-01(y).

⁴² See, e.g., “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” Figure 1, document page 36, HR page 719. A summary of how the Department inventoried these baseline emissions from oil and gas wells is in “Prevention of Deterioration Sulfur Dioxide Baseline Emission Rates,” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 4, document pages 79-83, HR pages 240-44. Revisions to this oil and gas baseline inventory were made based on additional historical oil and gas records found for some areas within 50 kilometers of ND’s class I areas. “May 2003 Prevention of Deterioration Sulfur Dioxide Final Baseline Emission Rates,” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 83, document pages 90-102, HR pages 6174-6186.

⁴³ See footnotes 27-33 above and accompanying text.

⁴⁴ “Air Quality Effects Analysis of Basin Electric Cooperative, Antelope Valley Station, Mercer County North Dakota, for Air Pollution Control Permit to Construct (January 13, 1978),” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 25, document page 71, HR page 2739.

⁴⁵ *Id.*, document page 76, HR page 2744.

⁴⁶ See footnotes 14 and 15 above and accompanying text.

⁴⁷ “Air Quality Effects Analysis of Basin Electric Cooperative, Antelope Valley Station, Mercer County North Dakota, for Air Pollution Control Permit to Construct (January 13, 1978),” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 25, document page 76, HR page 2744. See also footnotes 27-33 above and accompanying text. The “ANG” facility is the facility that later become known as the “Great Plains Synfuels” plant, and is currently known as the Dakota Gasification Company facility, commonly referred to by its acronym “DGC”. The permit to construct the DGC plant was granted in January 1978 just before Basin Electric made the

consumption predicted by the model was attributed to the proposed AVS Units 1 and 2 modeled at its proposed permit maximum emission rate of 11,832 pounds of stack emissions of SO₂ per hour.⁴⁸ To correct this potential modeled increment exceedance if AVS Units 1 & 2 were permitted at the 11,832 pounds per hour emission rate, AVS agreed to install SO₂ pollution control technologies (commonly referred to as “scrubbers”) on AVS Units 1 and 2 that would reduce the combined hourly maximum emissions from those two sources to 3,845 pounds per hour.⁴⁹ This reduced the predicted modeled concentration at the relevant high second high receptor in TRNP from 7.7 micrograms per cubic meter to 5 micrograms per cubic meter, which is exactly the amount of SO₂ 24-hour increment consumption that the Class I SO₂ 24-hour increment set by Congress.⁵⁰ The permit to construct AVS Units 1 & 2 was issued to Basin Electric on that basis in February 1978.

This meant, essentially, that all 5 micrograms of available 24-hour SO₂ increment were used up or consumed when the Department granted the permit to construct AVS Units 1 and 2 in February 1978. This occurred just 7 months after Congress had enacted the ’77 PSD Class I increments as part of the PSD Clean Air Act amendments on August 7, 1977, and before any of the implementing rules had even been promulgated.⁵¹

Basin Electric’s analysis for AVS Units 1 & 2 did not contain any of the ambient air monitoring required by Clean Air Act § 169(4) to establish monitored baseline concentrations for each of the SO₂ increments and other pollutants for the reasons discussed above – there was no monitoring technology then available that was capable of measuring very low concentration of SO₂ in the ambient air.⁵² Nor did Basin attempt to inventory or model the “baseline” concentration caused in TRNP and LWA by the dozens of minor source oil and gas sources for another reason discussed above – computer memory and capacity was being stretched merely by modeling the 4 major sources it modeled – there was not sufficient computer capacity at that time to model additional dozens of minor sources, nor had the process, procedure, or computer programs for doing so been developed or established.⁵³

In this 1978 modeling, Basin Electric modeled permit-allowable SO₂ emissions,⁵⁴ rather than actual emissions,⁵⁵ a policy that EPA would adopt in its 1978 rules, but would change in its

Antelope Valley permit application. One of the purposes of building the Antelope Valley plant was to supply the electricity DGC would need to convert lignite coal into natural gas.

⁴⁸“Air Quality Effects Analysis of Basin Electric Cooperative, Antelope Valley Station, Mercer County North Dakota, for Air Pollution Control Permit to Construct (January 13, 1978),” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 25, document page 78, HR page 2746, and January 9, 1978 letter from Health Department Environmental Chief W. Van Heuvelen to AVS production manager Kent E. Janssen, in *id.*, at Exhibit 25 document pages 5-6, HR pages 2673-74.

⁴⁹ *Id.*

⁵⁰ See footnote 24.

⁵¹ See footnotes 1-19 and accompanying text above.

⁵² See footnote 34 and accompanying text above.

⁵³ See footnotes 35, 44 and 45 above and accompanying text.

⁵⁴ In the PSD rules EPA adopted later in 1978, EPA adopted a policy of using permit-allowable or “approved allowable emissions” rather than actual pollutant emissions, preamble to June 19, 1978 PSD rules, 43 Fed. Reg. at 26,400 – a policy that would change after the *Alabama Power* decision, and the identification of the *Gulf Coast* problem.

⁵⁵ In the PSD rules EPA promulgated after the *Alabama Power* decision, EPA adopted an actual emissions policy because of the *Alabama Power* decision and the *Gulf Coast* problem (a problem of over-prediction of increment consumption when a source’s actual emissions are significantly below its permit-allowable emissions). 45 Fed. Reg. 52,675, 52,717-52,719 (August 7, 1980). But the “actual emissions” definition in the rules allows states to continue to

1980 rules, where an “actual emissions” definition was adopted to allow the emission rate in tons per year to be used, especially when over-prediction of increment consumption occurs because a source is emitting pollutants significantly below its maximum permit allowable amounts.⁵⁶ Permit-allowable emissions were the only option available for use in modeling for AVS Units 1 & 2 in early 1978, however, for an obvious reason – none of the increment consuming sources modeled at that time (Coal Creek, Coyote, or ANG) had completed construction or begun operation, so there were no “actual emissions” to either consider or model at that time.

2.3 Permitting of Stanton Unit 10 in May 1979

Even though all available SO₂ 24-hour increment in TRNP had been consumed with the permitting of AVS Units 1 & 2 in February 1978, the Department permitted construction of Stanton Unit 10 in May 1979.⁵⁷ This was done by Great River Energy agreeing to put a scrubber on its existing baseline source at the same location, Stanton Unit 1 (1967), and netting the emissions reductions on the existing baseline source with the increased emissions from the proposed new source (Stanton Unit 10), so there was no net increase in SO₂ emissions from that combined facility.⁵⁸ The United States Supreme Court determined that EPA’s policy of allowing such combined source “bubbling” and pollutant emission “netting” at a location is permissible under the Clean Air Act.⁵⁹

2.4 Permitting of Several Major Sources by FLM Certifications Issued under Clean Air Act § 165(d)(2)(C) in North Dakota

When Basin Electric submitted its air quality effects analysis for its proposed construction of AVS Units 1 & 2 in January 1978, it also began the application process for an additional coal-fired power plant production unit at Antelope Valley (AVS Unit 3).⁶⁰ In 1980, Nokota Company (February 1980) and Amoco (July 1980) initiated the permit processes for construction of two other additional major sources of SO₂ emissions – Nokota Methanol and Whitetail Gas.⁶¹ The permit applications for all three of these proposed new facilities were completed between May 1980 and June 1981.⁶²

Two issues had to be addressed, however, before the Department could make any determinations relating to these completed permit applications:

- Approval of a model better able to estimate pollutant concentration more than 50 kilometers downwind;⁶³ and
- Addressing in some way the fact that all available Class I 24-hour increment was consumed with the permitting of AVS Units 1 & 2.

use permit-allowable emissions as representative of actual emissions, if no actual emissions are available, or if actual emissions are close to permit allowable levels. See, e.g., N.D. Admin. Code § 33-15-15-01(1)(a)(1-4).

⁵⁶ “Legal Issues relating to PSD Baseline and Increment Consumption,” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 2, pages 91-113, HR pages 100-122.

⁵⁷ “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” Table 4, document page 29, HR page 712.

⁵⁸ Id.

⁵⁹ *Chevron, Inc. v. NRDC, Inc.*, 467 U.S. 837, 851-65 (1984).

⁶⁰ “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” Table 4, document page 29, HR page 712.

⁶¹ Id.

⁶² Id.

⁶³ See footnotes 39-42 and accompanying text above.

Several sources began to explore the possibility of a Federal Land Manager certification under Clean Air Act § 165(d)(1)(C) as one way of addressing the second issue.⁶⁴ To do this, however, the National Park Service and the Department of the Interior had to finalize their process and procedure under Clean Air Act § 165(d)(2)(C), and conduct scientific studies relating to air quality related values in TRNP and LWA and the potential impacts of the proposed new sources.

2.4.1 Approval of the Medium Range (Mesoscale) Model for PSD Compliance Modeling in North Dakota

The first issue – a model capable of performance beyond 50 kilometers – was addressed on September 29, 1982, when EPA published a notification in the federal register of its intent to approve the use of a medium range or mesoscale nonguideline (MESOPUFF) air quality model to evaluate four specific pending PSD permit applications.⁶⁵ This notice contained the following summary of the process the Department had gone through to develop and approve this model:

In 1978, the Department used RAMR⁶⁶ to predict that the 24-hour SO₂ Class I increment at the Theodore Roosevelt National Park (TRNP) South Unit has been consumed by new or modified sources east of the TRNP. New and potential PSD permit applicants, many of whom were farther than 50 km from TRNP, were faced with not receiving permits or demonstrating that emissions from their facility together with emissions from the other already permitted sources would not exceed the PSD increments. Thus, applicants, along with the Department, began searching for and evaluating Nonguideline medium-scale (about 50 to 200 km) transport and dispersion models, of which there are none recommended in the Guideline. These efforts resulted in a total of seven separate medium range (meso-scale) models being proposed for use by potential PSD permit applicants and the Department. Models were received by the Department about the same time that the corresponding PSD permit applications were received from the proposed facilities.

In 1979, the Department began an evaluation of the models following procedures mentioned in the PSD regulation and the Guideline on Air Quality Models. The evaluation consisted primarily of sensitivity studies and use of the “Workbook for Comparison of Air Quality Models”, EPA-450/2-78-028b. Results and conclusions from these analyses are contained in “The Selection of a Computer Modeling Procedure for the Simulation of Mesoscale Ground Level Air Quality Concentrations,” North Dakota State Department of Health, June 1981. The Department’s completed evaluation of the proposed mesoscale dispersion models was distributed for public comment in July 1981. A public hearing held jointly by EPA, Region VIII and the Department to receive oral and written comment on procedures proposed for use by the Department was convened on September 1-3, 1981. After substantial debate on all of the models and careful consideration of comments received, several suggested changes to the preferred models were made and the Department determined that both the MESOPUFF and Regional Transport Model (RTM) computer dispersion models were most appropriate for use in North Dakota where source receptor distances are greater than 50 km.

⁶⁴ See footnotes 16-19 and accompanying text above.

⁶⁵ 47 Fed. Reg. 42,806 (September 29, 1982).

⁶⁶ The steady state model used in the air quality analysis for AVS Units 1 & 2.

47 Fed. Reg. at 42,806-07.⁶⁷

Nonguideline models are approved on a case-by-case basis for application to specific PSD permit actions.⁶⁸ The Department requested EPA's approval of MESOPUFF as a then nonguideline model to evaluate the air quality impacts more than 50 kilometers downwind of the locations of pending permit applications for several proposed PSD sources in administrative proceedings under Clean Air Act § 165(d)(2)(C).⁶⁹ The Department received approval of MESOPUFF on February 1, 1983.⁷⁰ In 1993, EPA approved a different version of this mesoscale model, MESOPUFF II, as an alternative guideline model that does not need case-by-case approval.⁷¹ Other medium to long range air quality models such as CALPUFF, which EPA approved as a guideline model in 2003, have been developed and approved since then.⁷²

2.4.2 Federal Land Manager Certifications under Clean Air Act § 165(d)(2)(C) (a/k/a "FLM Certifications")

The second issue (addressing consumption of available 24-hour SO₂ class I increment when AVS Units 1 & 2 were permitted) was addressed in North Dakota after 1982 through a series of administrative proceedings under Clean Air Act § 165(d)(2)(C)⁷³ (sometimes referred to as "FLM variance determinations" or "FLM certifications") in which impacts on air quality-related values from the proposed PSD sources were considered.

In July 1982, the Interior Department published a notice of the internal procedures it would use to make FLM variance determinations under Clean Air Act § 165(d)(2)(C)(ii) & (iii), 42 U.S.C. § 7475(d)(2)(C)(ii) & (iii).⁷⁴ This notice explained the purpose of § 165(d)(2)(C) proceedings:

The class I increments apply to clean air regions containing areas such as national parks and wilderness areas. Under the Clean Air Act, Congress designated 158 natural, scenic, or historic areas of special national significance as class I. The class I increments represent the extremely small amount of additional pollution that Congress thought, as a general rule, should be allowed in class I areas. The class I increments also represent the restriction on additional pollution which Congress thought necessary in most cases for protection of the resources in class I areas. Typically, therefore, a proposed facility must not violate the class I increment.

The "adverse impact" determination, however, provides the possible exception to the general rule that a proposed facility must not violate the class I increment described above. The adverse impact determination, which is the subject of the internal procedures printed below, is a site specific test which examines whether a

⁶⁷ See also Department's 1981 and 1982 findings on MSPUFF model, a copy of which was filed in ND PSD Periodic Review Record, Exhibit 19, HR pages 1769-90.

⁶⁸ 47 Fed. Reg. at 42,806-07.

⁶⁹ Id.

⁷⁰ "A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota," document page 14, FN 21, HR page 697.

⁷¹ 40 CFR Part 51, Appendix W, Appendix B Summaries of Alternative Air Quality Models, pages B-43-45 (February 1993).

⁷² CALPUFF is the long-range transport model the Department used in its 2002-2003 PSD Periodic Review hearing.

⁷³ See footnotes 16-19 above and accompanying text.

⁷⁴ 47 Fed. Reg. 30,226 (July 12, 1982).

proposed facility will, in fact, unacceptably affect the resources of a class I area. If the Federal Land Manager of the class I area determines that a proposed facility will not adversely affect the class I area, then the permitting authority may authorize the facility even though the facility's emissions may cause a violation of the class I increment. (In this situation, the facility must, nevertheless, not exceed a revised set of class I increments established by section 165(d)(2)(C)(iv) of the Act.) Conversely, if the Federal Land Manager determines and convinces the permitting authority that a proposed facility will adversely affect the class I area even though it will not cause a violation of the class I increment, then the permitting authority may not authorize the facility. Thus, the adverse impact test is a critical test for a proposed facility desirous of locating near a class I national park or wilderness area.

Notice of Internal Procedures (§ 165(d)(2)(C)), 47 Fed. Reg. at 30,226.

This notice was issued in response to “an ongoing adverse impact determination concerning five major new facilities in North Dakota proposing to locate in the vicinity of Theodore Roosevelt National Park and Lostwood National Wildlife Refuge (wilderness portion), both mandatory class I areas.”⁷⁵ A separate notice published at the same time gave preliminary notice of the Federal Land Manager’s certification of no adverse impact on TRNP or LWA from these proposed new major sources.⁷⁶

Federal Land Manager (FLM) gave notice of his final determination and certification of no adverse impact on TRNP and LWA based on three proposed new sources, a “major modification” to expand capacity of the Little Knife natural gas processing facility then owned and operated by Warren Petroleum, and a “major modification” to AVS to add additional generating capacity with the proposed Unit 3, in September 1982.⁷⁷ In making that determination, the FLM summarized how he agreed with the North Dakota Department of Health’s analysis and application of criteria in determining air quality related value impacts:

The Department believes that changes which do not (1) diminish the national significance of the class I area, (2) impair the structure or functioning of the ecosystem, or (3) impair the quality of the visitor experience, are de minimis and, therefore, acceptable. Both the legislative history of section 165(d) of the Clean Air Act as well as EPA's regulatory definition of the term "adverse impact" support the Department's interpretation. The Department stands by its record in the case at hand as illustrative of the aggressive role required of the Federal Land Manager in protecting class I lands and of the proper allocation of the "benefit of the doubt" in favor of the lands' protection. Accordingly, based on "worst case" analyses with correspondingly ample margins of protection for the class I lands, the Federal Land Manager has concluded with confidence, and set forth in the record, that the granting of permits to the five proposed sources will not cause any unacceptable, adverse impacts on the air quality related values of Theodore Roosevelt NP and Lostwood NWR (wilderness portion).

1982 Certification of No Adverse Impact, 47 Fed. Reg. at 41,481-82.

Among the specific findings this certification made were the following:

⁷⁵ Id.

⁷⁶ 47 Fed. Reg. 30,222 (July 12, 1982).

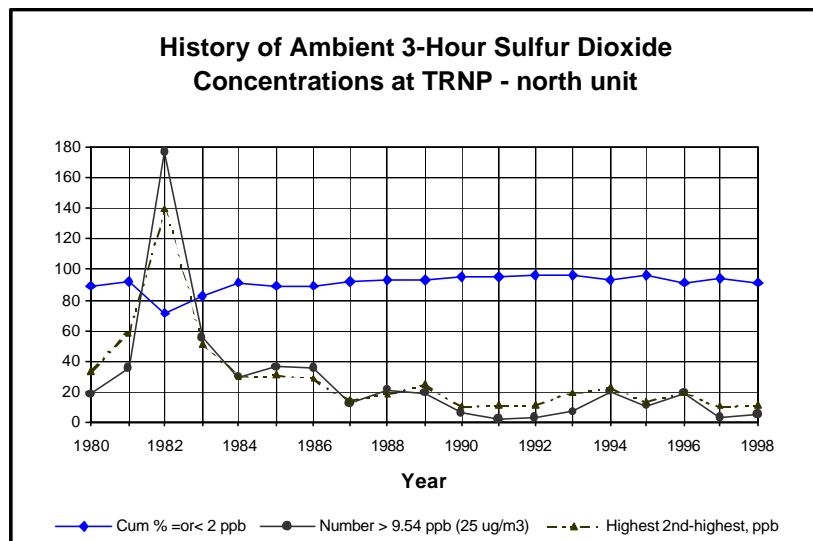
⁷⁷ 47 Fed. Reg. 41,480 (September 20, 1982).

- “Recent field evaluations of sensitive species in each class I area [TRNP and LWA] found no symptoms of visible injury due to current ambient air pollution.”⁷⁸
- “Many factors exist in this analysis that tend to overpredict effects on air quality related values. In other words, the actual impact on the resources from the proposed sources will probably be even less than the analysis assumes.”⁷⁹
- “The effects on air quality related values [in TRNP and LWA] are not found to impair the structure and functioning of ecosystems, impair the quality of visitor experience, or diminish the national significance of either class I area.”⁸⁰

The ultimate conclusion the determination reached was the following:

- “Granting these permits will not cause an unacceptable, adverse impact on the natural resources of Theodore Roosevelt NP or the wilderness portion of Lostwood NWR.”⁸¹

The “predicted concentrations” that the Department of Interior was using to make this determination of no adverse impact in TRNP and LWA was based on “modeled estimates *plus monitored concentrations*.”⁸² As the following graph from North Dakota’s PSD periodic review hearing record illustrates,⁸³ the highest *monitored concentrations* of SO₂ ever measured in TRNP and LWA were occurring in the north unit of TRNP *at the same time* (1982) that the air quality related value determinations were being made by the Interior Department (the relevant federal land manager for the National Park Service).



⁷⁸ 47 Fed. Reg. at 41,482 (finding 8).

⁷⁹ *Id.* at 43,483 (finding 10).

⁸⁰ *Id.* (finding 11).

⁸¹ *Id.* (conclusion 1).

⁸² *Id.* (Italics added for emphasis).

⁸³ Figure 7, “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” document page 23, HR page 706.

This graph illustrates that in 1982 in the north unit of TRNP there were nearly 180 3-hour periods⁸⁴ when *monitors* recorded 3-hour concentrations greater than 25 micrograms per cubic meter, or 9.54 ppb.⁸⁵ In comparison, this graph shows that the year with the second largest number of 3-hour concentrations higher than 25 micrograms per cubic meter in the north unit of TRNP happened the next year, 1983, when slightly fewer than 60 such 3-hour time periods occurred. After 1986, no more than 20 3-hour time periods have occurred where concentrations of SO₂ were higher than 25 micrograms per cubic meter (of the 2,920 3-hour time periods that are continuously monitored for SO₂ in each non-leap year).

In other words, the FLM certification of no adverse impact occurred at the time (1982) that the highest monitored concentrations of SO₂ ever recorded in TRNP were occurring.⁸⁶ Since then, the air quality has improved significantly from the 1982 levels.

The findings and conclusions in the certification of no adverse impact for TRNP and LWA recognized that the relatively high monitored SO₂ concentrations that were occurring in the north unit of TRNP in 1982 were related to the flaring of “sour” (i.e., unprocessed, high sulfur) natural gas from the numerous oil and gas wells in the area:

It is likely that the major contributors to the monitored SO₂ concentrations are existing sources near the class I areas. In the case of the proposed gas processing plants, processing sour natural gas which is presently being flared will result in an overall decrease in SO₂ emissions. This offset in emissions cannot be quantified without an extensive emission inventory of all the oil wells that are flaring gas (probably in the thousands); however, there should be an emission reduction when the proposed gas plants begin processing the sour gas.

⁸⁴ Id. at document page 22, HR page 705. To put this number in context, the history notes: “There are 2,920 3-hour block averages in one calendar year of 365 days.” Id.

⁸⁵ The permissible increment of *increase* in concentration over the baseline concentration in a class I area is 25 micrograms per cubic meter, or 9.54 ppb. See footnote 60 and accompanying text above. Monitored readings, of course, measure the impacts of the sources at the receptor based on their actual operation and the actual weather conditions, rather than computer simulations of these events. For example, PSD permitted increment consuming sources such as AVS Units 1 & 2 and the Great Plains Synfuels plant (now DGC) were not completed with their construction and did not begin operation until 1983 or later, so were not affecting air quality in 1982, even though they were consuming increment in the computer simulations done then. See “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” Table 4, document page 29, HR page 712.

In comparison, the class II 3-hour increment is 512 micrograms per cubic meter, 42 U.S.C. § 7473(b)(2), N.D. Admin. Code § 33-15-15-01(2)(b), the alternative 3-hour SO₂ increment that applies after the FLM has given a Clean Air Act § 165(d)(2)(C)(ii) certification such as this one is 325 micrograms per cubic meter, see footnotes 63-65 above and accompanying text, and the 3-hour secondary NAAQS SO₂ standard is 1300 micrograms per cubic meter, see footnotes 24-26 above and accompanying text.

⁸⁶ The highest and the highest 2d high monitored 3-hour SO₂ concentrations that have ever occurred in TRNP (145 ppb and 140 ppb) also both occurred in the north unit of TRNP in 1982. See graph above. And, again, the year with the next highest 2d high 3-hour concentrations was 1983, when the high 2d high monitored 3-hour SO₂ concentration was less than 60 ppb. See graph above. From 1987 on, no high 2d high monitored SO₂ concentration in the north unit of TRNP has been higher than 20 ppb. See graph above. See also “North Dakota Air Quality: Questions and Answers,” at footnotes 24-42 and accompanying text for discussion of monitored SO₂ 3-hour and 24-hour concentrations in TRNP in relation to the primary and secondary SO₂ NAAQS.

1982 Certification of No Adverse Impact, 47 Fed. Reg. at 41,483.

The decision concluded that the likely result of granting the certification of no adverse impact would be an overall reduction in the flaring of natural gas from oil and gas wells by the building of the plants to process and treat that gas. The monitoring data collected since 1982 shows that this in fact has occurred. The above graph of the 1980 to 1998 period shows that the monitored air quality in the north unit significantly improved as flared natural gas wells were connected to a collection system for treatment at the natural gas plants. This improvement has been maintained since 1987,⁸⁷ when many of the wells were tied in and new oil and gas production declined because of lower prices for crude oil on the international market, even as production from power plants more than 100 kilometers from TRNP and LWA grew in response to a growing regional demand for electricity.

The certification also noted that the law allows the FLM to raise air quality-related value (AQRV) issues even when the computer-estimated impact of a proposed new or modified source is less than the class I increment,⁸⁸ as well as when it is greater than the class I increment.⁸⁹ Thus, the FLM's certification made clear that it did not allow an increase in SO₂ concentration levels up to the alternative class I increment.⁹⁰ Rather, as the FLM noted in his certification, "[t]his certification is based on, and therefore limited to, concentrations at or below those specified in the State of North Dakota's pollution modeling and used in the Federal Land Manager's Technical Review."⁹¹ The FLM's technical review considered "predicted concentrations (modeled estimates plus monitored concentrations) in the park."⁹² This method of predicting impact is consistent with the methodology recommended by EPA in its "Prevention of Significant Deterioration Workshop Manual (October 1980)."⁹³ The FLM only agreed to the

⁸⁷ There are still flared oil and gas wells in 2004 in national grassland areas under the control of other federal agencies that still haven't been tied in to a gas processing plant because FLM's deny access.

⁸⁸ Clean Air Act § 165(d)(2)(C)(i) § (ii), 42 U.S.C. § 7475(d)(2)(C)(i) § (ii).

⁸⁹ Clean Air Act § 165(d)(2)(C)(i) § (iii), 42 U.S.C. § 7475(d)(2)(C)(i) § (iii).

⁹⁰ Clean Air Act § 165(d)(2)(C)(iv), 42 U.S.C. § 7475(d)(2)(C)(iv). See also footnotes 16-19 above, and accompanying text. The alternative increment does represent a "ceiling" to increases the FLM could allow based on air quality related value (AQRV) considerations.

⁹¹ 47 Fed. Reg. at 41,483.

⁹² Id.

⁹³ See § C.8.3 "Establishing Existing Air Quality," of "Prevention of Significant Deterioration Workshop Manual (October 1980)," where EPA tells the source to begin with the "continuous" air monitoring data collected by the state, id. at p. I-C-30, determine its sufficiency, representativeness, and reliability for their proposed location, id. at p. I-C-32, and determine whether any new sources had "commenced construction or operation" in the preceding year. Id. at p. I-C-33. If these criteria are satisfied, "the monitored air quality levels" may be used "as representing existing air quality in the impact areas of the proposed source." Id. The next step is to model air quality and increment consumption, id., § C.8.5, under which "allowable emissions of all sources" may be modeled as "a conservative first attempt." Id. at p. I-C-36. "If there is a significant difference between actual and allowable emissions" of a particular source, however, "modeling can be performed using actual rather than allowable emissions." Id. at p. I-C-37.

To determine the "total projected air quality" of the proposed new or modified source or sources, the "maximum increment consumed" as determined "at [the] point of highest increment concentration in [the] impact area" is added to the "existing air quality" (as determined primarily by monitoring as described above). Id. at p. I-C-40, Table C-5. This is essentially what the FLM did in his TRNP certification by adding "modeled estimates plus monitored concentration," (i.e.,

predicted increases in SO₂ concentration levels that were studied and considered – i.e., “[t]he predicted concentrations (modeled estimates plus monitored concentrations).”⁹⁴ “This certification specifically does not apply to any higher concentrations, such as the alternate concentrations set forth in Section 165(d)(2)(C)(iv) of the Clean Air Act.”⁹⁵

In sum, two decades of air monitoring after the FLM’s September 1982 certification of no adverse impact under Clean Air Act § 165(d)(2)(C) show an overall improvement in air quality after the proposed gas plants began processing sour gas from formerly flared oil and gas wells. These emission reductions resulted in the improvements in air quality that the FLM predicted in his certification of no adverse impact.⁹⁶

An additional certification of no adverse impact for the proposed Northern Gas natural gas processing facility was made in September 1984,⁹⁷ but this facility was never constructed.⁹⁸ Final Determination to extend the FLM certifications of no adverse impact made in September 1982 for two facilities (the proposed major modification to add AVS Unit 3 to the Antelope Valley Power plant and to build the Nokota Methanol plant) were made in February 1985.⁹⁹ But these facilities were never constructed either.¹⁰⁰

In March 1993, the Great Plains Synfuels Plant (now known as Dakota Gasification Company or DGC) received a certification of no adverse impact for a major modification to the DGC facility (installation of a scrubber to remove 93 percent of the sulfur emissions).¹⁰¹ The preliminary determination of no adverse impact had noted that a facility granted a certification of no adverse impact must comply with the alternate class I increment¹⁰² rather than the class I increment that applies without a variance¹⁰³:

[I]n the case of a permit issued under a FLM certification of no adverse impact, the source must still comply with an alternative set of PSD increments. Because only 3-hr and 24-hr SO₂ Class I increment exceedances were modeled, it is only necessary to compare the maximum modeled concentrations to the alternate SO₂ increments for these averaging times. The alternate 3-hr and 24-hr SO₂ increments are 325 and 91 ug/m³, respectively. The results of the State's modeling analysis reported above show that the maximum predicted concentrations at Theodore Roosevelt NP and Lostwood WA are well below the alternative Class I increments.

DGC Preliminary Determination of No Adverse Impact under CAA § 165(d)(2)(C)(iii), Fed. Reg. 52,788, 52,790 (November 5, 1992).

increment consumption determined by modeling to monitored SO₂ concentrations) to determine “predicted concentrations.” 47 Fed. Reg. at 41,483.

⁹⁴ 47 Fed. Reg. at 41,483.

⁹⁵ Id.

⁹⁶ See figure on page 13 and 47 Fed. Reg. 41,483.

⁹⁷ 49 Fed. Reg. 38,197 (September 27, 1984).

⁹⁸ “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” Table 4, document page 29, HR page 712.

⁹⁹ 50 Fed. Reg. 7,658 ((February 25, 1985).

¹⁰⁰ “A Review of the Historical Application of Prevention of Significant Deterioration in North Dakota,” Table 4, document page 29, HR page 712.

¹⁰¹ 58 Fed. Reg. 13,639 (March 12, 1993).

¹⁰² See footnotes 16-19 and accompanying text above.

¹⁰³ See footnote 14 and accompanying text above.

This FLM finding is not inconsistent with the FLM's 1982 certification which allows increases in SO₂ concentration levels only up to the levels considered in the certification – i.e., “[t]he predicted concentrations (modeled estimates plus monitored concentrations).”¹⁰⁴ The 1982 certification did not find that there were no adverse impacts in TRNP all the way up to the alternate increment, just to the level of impacts on AQRV's that the FLM had studied and considered.¹⁰⁵

The alternate class I SO₂ 3-hour and 24-hour increments (3-hour – 325 ug/m³, 24-hour – 91 ug/m³) are the maximum *ceiling* Congress established for deterioration of air quality in all class I areas from sources that are given FLM certifications.¹⁰⁶ The class I 3-hour and 24-hour SO₂ increments (3-hour – 25ug/m³, 24-hour 5 ug/m³) apply in all cases and to all facilities except facilities to which an FLM certification or variance has been given.¹⁰⁷ But the FLM certification does not allow impacts all the way up to the alternate “ceiling” (*i.e.*, the alternate increment), but only up to the levels considered in the FLM certification – which in 1982 FLM certification for TRNP and LWA was “[t]he predicted concentrations (modeled estimates plus monitored concentrations).”¹⁰⁸ Because these determinations are fact-specific and related to the actual physical and biological conditions in the park, they must always be reviewed and determined on “a case-by-case basis”.¹⁰⁹

In sum, as stated in the Interior Department's 1982 notice of procedure quoted above, “[i]f the Federal Land Manager of the class I area determines that a proposed facility will not adversely affect the class I area, then the permitting authority may authorize the facility even though the facility's emissions may cause a violation of the class I increment.”¹¹⁰ However, in that situation, “the facility must, nevertheless, not exceed a revised set of class I increments established by section 165(d)(2)(C)(iv) of the Act.”¹¹¹ But the FLM certification applies only up to the levels of pollution considered in the FLM certification.¹¹² And because these determinations are fact-specific to the actual conditions in the park, FLM certification under Clean Air Act § 165(d)(2)(C)(iv) must always be reviewed and determined on a case-by-case basis.¹¹³

¹⁰⁴ 47 Fed. Reg. at 41,483.

¹⁰⁵ See footnotes 134-41 and accompanying text above.

¹⁰⁶ In other words, deterioration of air quality is not allowed above the alternate Class I increment even if an FLM would determine that there were no AQRV-related impacts above the alternate increments. As noted at footnote 64 above, this alternate ceiling is absolute, and may not be exceeded even once during a 3-hour or 24-hour period each year. Clean Air Act § 163(a), 42 U.S.C. § 7473(a). If the FLM and the governor do not reach agreement, and the FLM “does not concur” with the recommendations of the state's governor that the variance be granted, CAA § 165(d)(2)(D)(ii), and the president agrees with the governor's recommendation, then still another alternate class I increment applies (e.g., low terrain 3-hour – 130 ug/m³, low-terrain 24-hour 36 ug/m³) that may be exceeded up to “18 days” per year (and which may not be reviewed in court). CAA § 165(d)(2)(D)(ii) & (iii), 42 U.S.C. § 7475(d)(2)(D)(ii) & (iii).

¹⁰⁷ “Legal Issues relating to PSD Baseline and Increment Consumption,” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 2, pages 134, HR pages 143.

¹⁰⁸ 47 Fed. Reg. at 41,483.

¹⁰⁹ *Id.* See also, e.g., 49 Fed. Reg. at 38,200 (“Each future application must be reviewed on a case-by-case basis ...”)

¹¹⁰ 47 Fed. Reg. at 30,222.

¹¹¹ *Id.*

¹¹² 47 Fed. Reg. at 41,483.

¹¹³ *Id.* See also, e.g., 49 Fed. Reg. at 38,200 (“Each future application must be reviewed on a case-by-case basis ...”)

2.5 Process and Procedure Interior Department Established for FLM Certification Review

The Interior Department laid out the process and procedure to be followed for Clean Air Act § 165(d)(2)(C) certification proceedings in its July 1982 notice.¹¹⁴ If a potential new source discovers that the computer modeled projected emissions from its proposed facility appear to be higher than the class I increment, one of the options for the facility undergoing PSD/NSR review (either “new source” or “major modification” review) is to make an application to the state and the FLM (which in the case of the national parks is the Interior Department) for an FLM certification of no adverse impact at those projected levels, following the process and taking the steps established by the Interior Department in 1982.¹¹⁵ This is the process that was followed in

¹¹⁴ See footnote 74 above.

¹¹⁵ See text accompanying footnote 74 above and 47 Fed. Reg. 30,226 (July 12, 1982). This notice, *Id.* at 30,226-27, lays out the following process and steps for the Interior Department to follow in the FLM certification process:

The following procedures apply to determinations under section 165(d)(2)(C)(ii) or (iii) of the Clean Air Act of whether a proposed new source will have an unacceptable, adverse impact on the air quality related values established for a class I area. The steps listed below are to be carried out as expeditiously as possible, without jeopardizing sound decisionmaking, in order to enable the permitting authority (the State or the Environmental Protection Agency (EPA)) to make its decision on the overall PSD permit application within one year of the filing of the completed application as required by section 165(c) of the Act. The following steps are also to be carried out in consultation with EPA as appropriate. Whenever provisions of the permitting authority's implementation plan make execution of the listed steps impossible (e.g., inadequate time allotments for the Federal Land Manager's determination), the procedures shall be adjusted as appropriate, after consultation with the Solicitor's Office.

1. Receipt of PSD permit application.
2. Technical review of application to determine need for additional information.
3. Technical review of impact of proposed new source on air quality related values (including visibility) of class I area.
4. Compliance with other statutory authorities, as applicable, including the following:
 - a. Initiation of consultation with the U.S. Fish and Wildlife Service if required under Endangered Species Act, 16 U.S.C. 1536.
 - b. Determination of effect, if appropriate, on properties included or eligible for inclusion in the National Register, and solicitation of comment from the Advisory Council on Historic Preservation if required under National Historic Preservation Act, 16 U.S.C. 470f.
5. Technical review of "adverseness" of impact (if any), and submission of bureau recommendation on "adverse impact" or "no adverse impact" determination.
6. Assistant Secretarial review of bureau recommendation on "adverse impact" or "no adverse impact" determination, and

all of the North Dakota Clean Air Act § 165(d)(2)(C)(ii) & (iii) proceedings conducted by the Interior Department for TRNP and LWA between 1982 and 1993.

3.0 Legislative History of CAA § 165(d)(2)(C)(ii) & (iii) and Related Provisions

As noted in the FLM notification relating to the process and procedure the Interior Department established for PSD FLM AQRV certification proceedings, the class I increments represent the small amount of additional pollution that Congress thought, “as a general rule,” should be allowed in class I areas.¹¹⁶ An FLM certification of no adverse impact is an “exception” to the general rule that is applied as “a site specific test” to examine “whether a

formulation of Assistant Secretarial determination under section 165(d)(2)(C)(ii) or (iii).

7. Notification of preliminary determination by letters to owner/operator of proposed new source, State, and EPA. Simultaneous with 7, publication of preliminary determination in "Notice" section of Federal Register, including –

- a. Statement as to availability of supporting documentation for inspection and copying at NPS Air Quality Division offices in Denver, Colorado, and in Washington, D.C., and at affected park and refuge headquarters; and
- b. Announcement of thirty-day public comment period (not to be extended except in the most unusual circumstances) on issues directly relevant to the determination in question.

9. Timely review and brief summarization of relevant comments received within comment period, and responses thereto.

10. Final Assistant Secretarial determination, as soon as possible after end of comment period, of "adverse impact" or "no adverse impact", with a clear and concise statement of reasons supporting that determination.

11. Notification of final determination by letters to owner/operator of proposed new source, State, and EPA. If final determination in a section 165(d)(2)(C)(iii) situation concludes "no adverse impact", Assistant Secretary (in role as "Federal Land Manager") shall so "certify" in letter.

12. Simultaneous with No. 11, publication of final determination in "Notice" section of Federal Register, including –

- a. Clear and concise statement of reasons supporting that determination;
- b. Statement as to availability of supporting documentation for inspection and copying at NPS Air Quality Division offices in Denver, Colorado and in Washington, D.C.; and
- c. Statement as to immediate effective date (as of date signed) of final determination.

¹¹⁶ 47 Fed. Reg. at 30,226.

proposed facility will, in fact, unacceptably affect the resources of a class I area.”¹¹⁷ The class I increments, however, were not established based on health or welfare impacts like the primary and secondary NAAQS,¹¹⁸ but rather were set primarily as a matter of policy at somewhat arbitrary levels.¹¹⁹

[The] level of deterioration which constitutes “significant” deterioration *is basically a subjective decision*, because the primary and secondary National Air Quality Standards are required to be protective of all known adverse effects on health and welfare on a nation-wide context.¹²⁰ (Italics provided.)

Responses EPA received when it developed the rules setting the original increments “confirmed that consideration of varying social, economic, and environmental factors in different areas would result in varying definitions of what constitutes significant deterioration.”¹²¹ After reviewing the scientific evidence and all the public comments, EPA concluded that none of the information reviewed enabled EPA to justify anything “but a subjective method” for defining when increases in concentration of pollutants become “significant.”¹²²

Clean Air Act § 165(d)(2)(D)(i) § (ii)¹²³ calls a state governor’s determination of no adverse impact¹²⁴ a “variance”. This is holdover language from the original EPA PSD rules that borrowed language and concepts from zoning and land use planning law. The final promulgated version of EPA’s first PSD rules had changed its heavy reliance on zoning and land use planning terminology in an earlier draft to “avoid confusion with conventional zoning concepts.”¹²⁵

EPA had used zoning and land use planning as a model for conceptualizing how to develop the PSD program because, like in zoning and land use planning, the original PSD rules were developed with the understanding that state and local governments would be primarily responsible under the PSD rules for managing air pollution at levels below the NAAQS at the state and local level – the “Clean Air Act places primary responsibility for the prevention and control of air pollution on the States and local governments.”¹²⁶ “Strong sentiment” was expressed in the original PSD rulemaking that States and localities be given the maximum degree of flexibility in making judgments as to when increases in concentration are “significant,”

¹¹⁷ *Id.*

¹¹⁸ See Clean Air Act § 109, 42 U.S.C. § 7409; Clean Air Act § 109(d), 42 U.S.C. § 7409(d); EPA website, EPA Green Book, at <http://www.epa.gov/oar/oagps/greenbk/multipol.html>; EPA website, EPA Green Book, at <http://www.epa.gov/oar/oagps/greenbk/anay.html>.

¹¹⁹ See footnote 3 and accompanying text.

¹²⁰ 39 Fed. Reg. 31,000, 31001 (August 27, 1974).

¹²¹ *Id.*

¹²² *Id.*

¹²³ 42 U.S.C. § 7475(d)(2)(D)(i) § (ii).

¹²⁴ This provision applies if the FLM and the state do not reach agreement regarding whether a certification of no adverse impact should be given. See footnote 19 above.

¹²⁵ 39 Fed. Reg. at 31004. EPA explained that under conventional zoning practices, “a zone is a relatively small area” such as a city block. *Id.* The areas classified under the PSD regulations, however, would of necessity have to be much larger, “often consisting of, at a minimum, several large counties.” *Id.* “Initial classification of smaller individual areas does not appear feasible because the carryover of pollution from one small area to another cannot be adequately controlled.” *Id.*

¹²⁶ 39 Fed. Reg. at 31001. See also Clean Air Act § 101(a)(4), 42 U.S.C. § 7401(a)(4), which provides that “States and local governments” retain “primary responsibility” under the Clean Air Act over “air pollution prevention ... and air pollution control at its source.”

because the judgments must be based on “considerations that vary from locality to locality.”¹²⁷ EPA explained why it was giving primacy over the PSD program to states and localities:

Stemming from concern over the impact of regulations to prevent significant deterioration on land use patterns, and the necessarily subjective nature of any determinations in this regard, the roles of Federal, State, and local governments are very important. Any policy to prevent significant deterioration involves difficult questions regarding how the land in any area is to be used. Traditionally, these land use decisions have been considered the prerogative of local and State governments, and in the regulations promulgated herein, *the primary opportunity for making these decisions is reserved for the States and local governments.*¹²⁸ (Italics added.)

When the Senate was engaged in a critical debate in 1976 concerning whether to enact the PSD amendments to the Act, or to kill these amendments and convert the PSD provisions into a Congressional study, the survival of the PSD provisions of the Bill turned on whether states would have the final say over PSD class I increment determinations:¹²⁹

Moments before the Senate’s most controversial action on PSD – its rejection of Senator Moss’ amendment to strike the PSD provisions of the bill in favor of a study – Senator Muskie, the floor manager of the bill, was engaged in the following colloquy by Senator Nunn:

Senator Nunn: “Is it not true that under the pending bill, an industry may build near a class I area, even if the increments are exceeded, if the state is convinced that this will not impair the air-quality values in the Class I area?”

Senator Muskie: “That is also true.”

Similarly, Senator Muskie told Senator Allen at another point during floor consideration that

[t]he bill allows the state to decide to issue a permit to a source even if it fails to pass the stringent class I increments. This occurs after the Federal Land Manager presents the case for such issuance based on air quality values. The decision is then left to the State.

Nor was Senator Muskie alone in these views. Three other Senators who were leading members of Senator Muskie’s committee and strong supporters of PSD endorsed Senator Muskie’s answer to Senator Allen as the intent of the legislation. Senator McClure, a committee member and backer, albeit somewhat lukewarm, of the bill’s PSD provisions, engaged in a similar colloquy with Senator Fannin, explaining that while the Federal Land Manager has the

¹²⁷ Id.

¹²⁸ Id.

¹²⁹ See Craig N. Oren, “The Protection of Parklands from Air Pollution: A Look at Current Policy,” 13 Harv. Env’tl Law Rev. 313, 376-81 (1989). The analysis supporting this statement is quoted at length in the conclusion to “Legal Issues relating to PSD Baseline and Increment Consumption,” North Dakota SO₂ PSD Periodic Review Hearing Exhibit 2, pages 145-46, HR pages 154-55.

affirmative responsibility to protect air quality related values, 'the final decision still rests with the State.'¹³⁰

A conference committee agreement that resolved differences between the House and Senate versions of the amendments to the Clean Air Act died at the end of the 1976 session primarily because of a Senate filibuster prompted largely by the PSD provisions.¹³¹

The 1977 House Bill, H.R. 6161, left out any class I variance provisions or the alternate class I increments, but both class I variance provisions and alternate class I increments were eventually incorporated into the final version of the Act (subsections 165(d)(2)(C) & (D)) adopted by the 1977 CAA Conference Committee and enacted by Congress into law. The House Report gave the following explanation of why these provisions were not included in the House's version of the bill:

Some have proposed a variance allowing class II air pollution levels in national parks and other Federal class I lands under certain conditions. The committee has not included such a class I variance in H.R. 6161, because after carefully reviewing this variance proposal, it determined:

(1) The class I variance is not necessary since EPA and FEA studies prove that the designation of class I lands will not restrict necessary coal-fired powerplants and other industrial development; ... [and]

(2) The class I variance's implementation would mean serious, irreversible degradation of our national parks and other national lands and 'possibly eliminate the effect of the PSD increment.' EPA analysis shows that a variance allowing class II air pollution levels in national parks on 18 days per year would reduce visibility in areas such as the Grand Canyon by up to 75 percent. It would increase pollution levels by up to 12 times in national parks and allow new plants, near parks, up to 12 times larger than could be built without a variance. This is so because the class II increments allow 12 1/2 times more pollution than the class I increments.¹³²

¹³⁰ Oren, 13 Harv. Env't'l Law Rev. at 380-81. (Footnotes omitted.)

¹³¹ See legislative history summarized in "Legal Issues relating to PSD Baseline and Increment Consumption," North Dakota SO₂ PSD Periodic Review Hearing Exhibit 2, pages 39-40, HR pages 48-49.

¹³² P.L. 95-95, Clean Air Act Amendments of 1977, H.REP. 95-294, 95th Cong. 1st Session, (May 12, 1977), at pages 158-59. The House version of the Bill also had other important differences (including significantly different sizes for mandatory Class I Areas and other federal lands) than enacted in the final Act. See *id.* at 142-43, which summarizes the following differences in size and designation of areas in contrast to the final version of the amendments to the Act at CAA § 162(a), 42 U.S.C. § 7472(a):

The initial class II designation would apply to virtually 100 percent of all non-Federal lands in clean air areas and 95 percent of all Federal lands. The only areas designated as class I in this legislation are a relatively small number of Federal land units comprising approximately 2.0 percent of the total land area of the United States. And only a part of these lands; that is, existing national parks over 25,000 acres in size, existing national wilderness areas over 25,000 acres, and national monuments, recreation areas and primitive areas, exceeding 100,000 Federal acres, would be mandatory class I and would remain permanently as class I. The remainder of the relatively few Federal class I areas that initially would be

In contrast to the 1977 House bill, the 1977 Senate bill left the class I variances in, and focused on air quality related values (AQRVs) in each national park when examining whether a class I variance should be granted in any particular case. The Senate Report, issued two days before the House Report, states that the intent of the class I increments and the AQRVs is “to provide additional protection for air quality in areas where the Federal Government has a special stewardship to protect the natural values of a national resource.”¹³³

The Senate Report made clear, however, that AQRV determinations would have primacy in deliberations concerning the protection of class I areas. The class I increments were described as

*“a flexible test ... for determining where the burden of proof lies and is an index of changes in air quality. It is not the final determinant for approval or disapproval of the permit application.”*¹³⁴ (Italics provided.)

The Senate Report also described the purpose of the AQRVs:

“[T]he term ‘air quality related values’ of Federal lands designated as Class I areas includes the fundamental purposes for which such lands have been established and preserved by the Congress and the responsible Federal Agency. For example, under the 1916 Organic Act to establish the National Park Service (16 U.S.C. section 1), the purpose of such national park lands ‘is to conserve the

designated as class I, the States would be free, to redesignate as class II so long as they follow appropriate procedures.

These discretionary class I areas include national parks and national wilderness areas between 1,000 and 25,000 acres in size, international parks over 1,000 acres, and national monuments, national recreation areas, national preserves and national primitive areas, all in excess of 10,000 and less than 100,000 Federal acres. Again, all other Federal lands (making up 95 percent of all Federal lands) are initially classified class II and authority for their redesignation, if any, is vested entirely in the States. The only further limit to State redesignation is that the following Federal areas over 10,000 acres in size may not be redesignated class III: national wild and scenic rivers, national lakeshores or seashores, national wildlife refuges or national forests. Such land units smaller than 10,000 acres in size may be redesignated by the States as class III.

All national grasslands under the supervision of the Bureau of Land Management and Defense Department lands, are treated for classification purposes as if they were State or private lands. That is, they are initially designated class II and the States are authorized to redesignate them as class I or class III. These lands make up approximately 70 percent of all Federal lands. (Emphasis provided.)

LWA (a wilderness area of less than 25,000 acres) and TRNP (in 1977, still a national memorial park less than 100,000 acres, rather than a national park (see footnote 13 above)) would not have been mandatory Class I areas under the 1977 House version of the Bill, but rather discretionary ones, although this intent was not absolutely clear in the House Bill, because it did not mention “memorial parks” specifically, as does the final language of CAA § 162(a), 42 U.S.C. § 7472(a), which makes memorial parks over 5,000 acres (TRNP in 1977) class I areas.

¹³³ S. Rep. 95-127, 95th Cong. 1st Session, at 34 (May 10, 1977)

¹³⁴ *Id.*, at 35.

scenery and the natural historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”¹³⁵

In sum, the Senate Report makes clear that the Class I increments are “a flexible test” for determining “where the burden of proof lies” in making AQRV determinations. The AQRVs are to be applied on a case-by-case and park-by-park basis after considering the impacts of the proposed source on “the fundamental purposes for which such lands have been established and preserved.” For example, impacts on visibility from SO₂ and sulfates will be considerably different in TRNP, where the views or “vistas” from the high points in the park may range from 10 to 40 miles, than in Grand Canyon National Park or Rocky Mountain National Park, where the views or vistas looking into the canyon or out onto the plains from a mountaintop may extend for well over 100 miles (i.e., the same level of pollution will impair a view more if you are looking through more air). The impacts of “deposition” of SO₂ and sulfates through rain will, likewise, be considerably different in TRNP (because it receives relatively little rain and has soils that are “buffered” against any effects from acid rain), than in an eastern national park that receives (1) much more rain, and (2) whose soils are not buffered against the effects of acid rain. In sum, the AQRVs were designed as a “flexible” site and park specific test to be applied on a case-by-case basis based on the actual and potential impacts of a proposed source on the unique characteristics of the park or wilderness area, including its scenery, natural historic objects, and wildlife.

The 1977 Senate-House Conference Committee reached agreement on and enacted the following language in Clean Air Act subsections 165(d)(2)(C) & (D):

(C)(i) In any case where the Federal official charged with direct responsibility for management of any lands within a class I area or the Federal Land Manager of such lands, or the Administrator, or the Governor of an adjacent State containing such a class I area files a notice alleging that emissions from a proposed major emitting facility may cause or contribute to a change in the air quality in such area and identifying the potential adverse impact of such change, a permit shall not be issued unless the owner or operator of such facility demonstrates that emissions of particulate matter and sulfur dioxide will not cause or contribute to concentrations which exceed the maximum allowable increases for a class I area.

(ii) In any case where the Federal Land Manager demonstrates to the satisfaction of the State that the emissions from such facility will have an adverse impact on the air quality-related values (including visibility) of such lands, notwithstanding the fact that the change in air quality resulting from emissions from such facility will not cause or contribute to concentrations which exceed the maximum allowable increases for a class I area, a permit shall not be issued.

(iii) In any case where the owner or operator of such facility demonstrates to the satisfaction of the Federal Land Manager, and the Federal Land Manager so certifies, that the emissions from such facility will have no adverse impact on the air quality-related values of such lands (including visibility), notwithstanding the fact that the change in air quality resulting from emissions from such facility will cause or contribute to concentrations which exceed the maximum allowable increases for class I areas, the State may issue a permit.

¹³⁵ Id., at 36.

(iv) In the case of a permit issued pursuant to clause (iii), such facility shall comply with such emission limitations under such permit as may be necessary to assure that emissions of sulfur oxides and particulates from such facility will not cause or contribute to concentrations of such pollutant which exceed the following maximum allowable increases over the baseline concentration for such pollutants:

Maximum allowable increase
(in micrograms per cubic meter)

Particulate matter:

Annual geometric mean.....	19
Twenty-four-hour maximum	37

Sulfur dioxide:

Annual arithmetic mean.....	20
Twenty-four-hour maximum	91
Three-hour maximum	325

(D)(i) In any case where the owner or operator of a proposed major emitting facility who has been denied a certification under subparagraph (C)(iii) demonstrates to the satisfaction of the Governor, after notice and public hearing, and the Governor finds, that the facility cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for periods of twenty-four hours or less applicable to any class I area and, in the case of Federal mandatory class I areas, that a variance under this clause will not adversely affect the air quality related values of the area (including visibility), the Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may grant a variance from such maximum allowable increase. If such variance is granted, a permit may be issued to such source pursuant to the requirements of this subparagraph.

(ii) In any case in which the Governor recommends a variance under this subparagraph in which the Federal Land Manager does not concur, the recommendations of the Governor and the Federal Land Manager shall be transmitted to the President. The President may approve the Governor's recommendation if he finds that such variance is in the national interest. No Presidential finding shall be reviewable in any court. The variance shall take effect if the President approves the Governor's recommendations. The President shall approve or disapprove such recommendation within ninety days after his receipt of the recommendations of the Governor and the Federal Land Manager.

(iii) In the case of a permit issued pursuant to this subparagraph, such facility shall comply with such emission limitations under such permit as may be necessary to assure that emissions of sulfur oxides from such facility will not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which exceed the following maximum allowable increases for such areas over the baseline concentration for such pollutant and to assure that such emissions will not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of 24 hours or less on more than 18 days during any annual period:

MAXIMUM ALLOWABLE INCREASE

[In micrograms per cubic meter]

Period of exposure	Low terrain High terrain	
	areas	areas
24-hr maximum	36	62
3-hr maximum	130	221

(iv) For purposes of clause (iii), the term "high terrain area" means with respect to any facility, any area having an elevation of 900 feet or more above the base of the stack of such facility, and the term "low terrain area" means any area other than a high terrain area.¹³⁶

Senator Muskie summarized the intent and purpose of the above Clean Air Act class I variance provisions as follows in the congressional record:

“Even if technically there may be a violation of the Class I increments within the park area, the people who propose to build a plant can apply for consideration of the application for a permit on the basis of [whether] the damage...to air quality values [would be] nonexistent. (*sic. – possible intended word order and language for ellipses added*) So there is opportunity and some flexibility even close to some of these Class I areas which the bill seeks to protect ... Obviously if we set Federal standards there is some responsibility at the federal level. The Federal decision makers are also bound to consider the provisions for flexibility which are written into the statute, and we would expect them to be so bound.”¹³⁷

The 1977 Senate-House Conference Committee that drafted the final enacted language of Clean Air Act §§ 165(d)(2)(C) & (D) did not write a legislative report describing their intent. Based on the plain language enacted and the above legislative history, however, it is clear that the following compromises were reached:

- States retain their vital role described in the 1976 Senate floor debate, because each state’s governor retains an ability to disagree, and even trump, an FLM decision, subject to, essentially, a presidential veto;¹³⁸
- The 1977 House version of the law, H.R. 6161 (which took out all Class I variances altogether), was rejected;
- The 1977 Senate version of the law was adopted that (1) focused on AQRVs rather than the class I increment as the ultimate test, and that (2)

¹³⁶ 42 U.S.C. § 7475(d)(2)(C) & (D).

¹³⁷ Comments of Senator Muskie, Congressional Record, Vol. 123, at page 18,464.

¹³⁸ CAA § 165(d)(2)(D)(I & ii), 42 U.S.C. § 7475(d)(2)(D)(I & ii); see also footnotes 128-130 above and accompanying text.

allowed three different forms of variances to the Class I increments that are to be considered on a case-by-case basis;¹³⁹

- Congress set alternate Class I increments for FLM certifications of no adverse impact,¹⁴⁰ and a second set of alternate Class I increments for either a governor's or a presidential variance;¹⁴¹ and
- Even though the House's version of the bill (taking out Class I variances altogether) was not adopted, Congress altered the size when national parks become mandatory Class I areas (making them smaller so more national parks and wilderness areas qualified),¹⁴² and the AQRV test was made to apply "[i]n any case."¹⁴³

In sum, Congress rejected the House version of the PSD amendments to the Clean Air Act that would not have contained any Class I variances. Instead, Congress enacted a modified version of the Senate's 1977 bill that allowed FLM certifications and variances to the class I increments to be given under specified circumstances,¹⁴⁴ that set alternate increments as a second "ceiling" that may not be exceeded,¹⁴⁵ and that made AQRVs the underlying concern when considering the possible impacts of a proposed new source on a mandatory class I area.¹⁴⁶ In this final enacted version, Congress established a process that:

- requires notice to the FLM in "any case" that may impact a Class I area;¹⁴⁷
- gives the FLM first say in whether to allow a Class I variance;¹⁴⁸
- gives the state's governor authority to allow a Class I variance if he disagrees with the FLM's decision;¹⁴⁹ and
- gives the president final say if the state and the FLM cannot then agree on whether a variance is appropriate.¹⁵⁰

This statutory process, however, has never advanced in North Dakota (or in any other state) beyond the FLM certification step (CAA § 165(d)(2)(C)(ii) & (iii)), because there has

¹³⁹ CAA § 165(d)(2)(C), 42 U.S.C. § 7475(d)(2)(C); see also footnotes 131-134 and accompanying text above.

¹⁴⁰ CAA § 165(d)(2)(C)(iv), 42 U.S.C. § 7475(d)(2)(C)(iv).

¹⁴¹ CAA § 165(d)(2)(D)(iv), 42 U.S.C. § 7475(d)(2)(D)(iv).

¹⁴² See footnote 131 above.

¹⁴³ CAA § 165(d)(2)(C)(i), 42 U.S.C. § 7475(d)(2)(C)(i).

¹⁴⁴ 42 U.S.C. § 7475(d)(2)(C) & (D).

¹⁴⁵ See footnotes 105-112 and accompanying text above.

¹⁴⁶ Professor Oren reaches the same conclusion, although he discusses primarily the 1976 Senate version of the proposed amendments, *i.e.*, "[t]he legislative history ... suggests that its sponsors intended the states to have the final say on whether a source could locate even if the increments would be exceeded." Oren, 13 Harv. Envt'l Law Rev. at 380. There are no agency opinions and no federal cases interpreting these provisions other than those discussed in footnotes 73-112 and accompanying text, thus making this primarily an issue that affects only North Dakota.

¹⁴⁷ CAA § 165(d)(2)(C)(i), 42 U.S.C. § 7475(d)(2)(C)(i).

¹⁴⁸ CAA § 165(d)(2)(C)(ii & iii), 42 U.S.C. § 7475(d)(2)(C)(ii & iii).

¹⁴⁹ CAA § 165(d)(2)(D)(i), 42 U.S.C. § 7475(d)(2)(D)(i).

¹⁵⁰ CAA § 165(d)(2)(D)(ii), 42 U.S.C. § 7475(d)(2)(D)(ii).

never been a case where North Dakota's governor and the FLM disagreed about whether a certification of no adverse impact should be given.¹⁵¹

3.1 Summary of Legislative History of PSD Class I Variance Sections of CAA § 165

In sum, the issue of whether to allow variances and FLM certifications of no adverse impact to the class I increments was a topic of considerable debate when Congress enacted the 1977 PSD amendments to the Clean Air Act. In the final version enacted by Congress, both the FLM and states are given important roles and authority to make such determinations. The Act provides that if, in the end, the FLM and the state cannot reach agreement on whether to give a certification of no adverse impact or "variance", the president has the final say. No proceeding under Clean Air Act §§ 165(d)(2)(C) & (D) has ever reached that level, and the FLM determinations of no adverse impact for TRNP are among the few, if not the only, such determinations that have been made under the Act.¹⁵²

3.2 Discussion of *Alabama Power*

EPA Region 8 wrote to the North Dakota Department of Health on February 1, 2000 (in a discussion of how to regulate SO₂ emissions from North Dakota sources that had been given PSD variances) that:

"... the State is still required to correct the Class I increment, which could be accomplished by obtaining reductions from other increment-consuming sources or by expanding the increment through reductions in emissions from baseline sources."¹⁵³

Region 8's letter failed to cite or discuss any of the FLM certifications of no adverse impact granted to North Dakota sources between 1982 and 1993, or the relevant language of the PSD provisions of the Act and their legislative history, discussed in sections 2.0 through 3.1 above. Instead, Region 8's letter relies for legal authority on part of a single sentence from the *Alabama Power* decision that states:

"The Alabama Power Decision explains that, although the Class I variance does treat the applicable PSD source with special consideration, the 'totality of facilities ... may be subject to measures necessary to cope with a condition of pollutants exceeding the PSD maximum.' [See *Alabama Power Co. v. Costle*, 636 F.2d 323 at 363 (D.C. Cir. 1979).]"¹⁵⁴

Based on this authority, Region 8's letter reaches the following alternative conclusions:

"Thus, although the FLMs granted variances for these PSD facilities, the State should have revised the SIP to correct the increment violations. Alternatively, EPA should have issued a call for a SIP revision pursuant to 40 CFR 51.166(a)(3), which we could still do."

¹⁵¹ See footnotes 73-112 and accompany text above discussing this history.

¹⁵² See footnote 143.

¹⁵³ February 1, 2000 letter from Richard R. Long to Jeff Burgess, page 3, ND PSD Periodic Review Exhibit 17, HR page 1516.

¹⁵⁴ February 1, 2000 letter from Richard R. Long to Jeff Burgess, page 3, ND PSD Periodic Review Exhibit 17, HR page 1516.

The part of the sentence from *Alabama Power* quoted by Region 8 is from a portion of the opinion that discusses “Protection of the Increments.”¹⁵⁵ This section of the opinion begins by determining that EPA has authority under the Act to prevent or correct “a violation” of the increments, but is “without authority to dictate to the States their policy for management of the consumption of allowable increments.”¹⁵⁶ The section on “Protection of the Increments” is not limited to a discussion of Class I areas and increments, but rather involves a general discussion of “Class I, II, and III areas,” all of which have different “maximum allowable increases”¹⁵⁷ over each applicable baseline concentration.

Alabama Power discusses the following purpose for the Class I, II, and III increments:

“These provisions [the Class I, II, and III increments] set as the threshold of ‘significant deterioration’ for each pollutant in each area the lower of the allowable increment of the applicable NAAQS, (*sic.*) and the emphatic goal of the PSD provisions is to prevent those thresholds from being exceeded.”¹⁵⁸

This sentence contains an obvious typographical error or ellipsis because the section of the Act cited in the footnote, CAA § 163(b)(4), 42 U.S.C. § 7473(b)(4), provides that “the maximum concentration of any pollutant” shall not exceed the lower of either (A) the secondary or (B) the primary NAAQS for that pollutant. In other words, a proposed new facility may be located in an area where the “baseline concentration” for the pollutant of concern is near to, but not over, the secondary or primary NAAQS standard for that pollutant. In such a case, adding the allowable Class I, II, or III increment to the “baseline concentration” may result in a total “maximum concentration of the pollutant” that exceeds the secondary or primary NAAQS standard. CAA § 163(b)(4) says, essentially, that in such a circumstance, the relevant primary or secondary NAAQS standard sets the “total concentration” in the air that may not be exceeded, rather than the Class I, II, or III increments.

Why the *Alabama Power* court made the editorial comment that the “emphatic goal” of the PSD provisions is to prevent those thresholds from being exceeded is not clear. It cites no authority or legislative history to support this statement. Congress itself, at CAA § 160(2), (3), & (5), 42 U.S.C. § 7470(2), (3), & (5), defined the goals and purposes of the PSD amendments to the Act to include:

(2) to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value;

(3) to insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources; [and]

...

¹⁵⁵ *Alabama Power*, 636 F.2d at 361-64.

¹⁵⁶ *Id.* at 361.

¹⁵⁷ *Id.* This section of the opinion discussing “Protection of the Increments”, *id.* at 361-64, does not discuss, however, protection of the alternate increments at CAA § 165(d)(2)(C) & (D), which are also defined as “maximum allowable increases over the baseline concentration.” CAA § 165(d)(2)(C)(iv) & (D)(iii), 42 U.S.C. § 7475(d)(2)(C)(iv) & (D)(iii).

¹⁵⁸ *Alabama Power*, 636 F.2d at 362.

(5) to assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process.

It was the balancing of these different and sometimes conflicting goals – (1) to protect national parks and wilderness areas, (2) to allow economic growth consistent with the preservation of existing clean air resources, and (3) to provide a process for public input and participation those decisions – that caused the sometimes contentious compromises reflected in the legislative history that are discussed above in section 3.0 of this document, footnotes 115-150 and accompanying text. If Congress had any “emphatic goal” with regard to the Class I increments, it was to find a compromise that would protect the “air quality related values” for each park or wilderness area, while allowing for economic growth consistent with protecting the resource, and providing a public process that allowed for consideration of potential impacts on a Class I area on a case-by-case basis, rather than to set an absolute “threshold” that could not be crossed under any circumstance.

In context, the language from *Alabama Power* relied on by Region 8 provides:

“Industry petitioners also rely on those sections of the Act that provide for waiver provisions which, conceivably, could allow increments to be exceeded. The waiver has vitality and recognition in that facilities granted special consideration under these provisions are, in effect, treated as facilities operating in compliance with the provisions of the Act. But the totality of facilities in compliance, as a group, may be subject to measures necessary to cope with a condition of pollutants exceeding the PSD maximum.”¹⁵⁹

The most reasonable construction of this discussion of “waivers” is not that it requires offsets from baseline and increment consuming sources for any increases in SO₂ emissions from the new source given an FLM certification – that would make the whole FLM certification process and AQRV analysis pointless, since offsets would allow a facility to be constructed without going through the FLM certification and AQRV impact determination. Rather the last sentence quoted above refers to the need for increment consuming facilities causing a Class I increment violation to take steps to correct that violation – not to provide even further additional offsets for a new facility.

Further, this reference to the “waiver” provisions in the PSD amendments to the Act contains no citation to or discussion of the language of CAA § 165(d)(2)(C) & (D), or no discussion of the purpose and legislative history of the statute discussed in section 3.0 of this document, footnotes 115-150, and accompanying text. It appears to be thrown in as an example, and appears to have all the markings of *dicta*. The *Alabama Power* case was, in fact, a decision issued in response to a petition for review of a PSD rulemaking,¹⁶⁰ rather than a decision reviewing an administrative record or court proceeding where the facts were fully developed. The issue of “waivers” – i.e. FLM certifications of no adverse impact and governor and presidential variances – was not an issue that was raised and addressed in the various petitions for review in that case. As North Dakota’s recent PSD periodic review hearing under 40 C.F.R. § 51.166(a)(4) illustrates, the legal and factual issues become clearer and more defined in the process of public hearing and comment.

¹⁵⁹ *Alabama Power*, 636 F.2d at 363.

¹⁶⁰ *Id.* at 344.

Construing the 1977 PSD amendments to the Act as a whole, after considering their context and legislative history discussed in the previous sections of this document,¹⁶¹ the above language from *Alabama Power* cannot reasonably be construed in the context of the rest of the Act as requiring offsets from baseline sources and increment consuming sources for any increased emissions from a source given an alternate FLM Class I increment certification of no adverse impact. Rather, the plain meaning of the language of CAA § 165(d)(2)(C)(iv), 42 U.S.C. § 7475(d)(2)(C)(iv), (the FLM alternate increment) provides:

In the case of a permit issued pursuant to clause (iii), such facility shall comply with such emission limitations under such permit as may be necessary to assure that emissions of sulfur oxides and particulates from such facility will not cause or contribute to concentrations of such pollutant which exceed the following maximum allowable increases over the baseline concentration for such pollutants:

Maximum allowable increase
(in micrograms per cubic meter)

Particulate matter:

Annual geometric mean.....	19
Twenty-four-hour maximum	37

Sulfur dioxide:

Annual arithmetic mean.....	20
Twenty-four-hour maximum	91
Three-hour maximum	325

(Emphasis supplied.)

There is nothing in either the language of CAA § 165(d)(2)(C)(iv) or its legislative history that requires any kind of offset for SO₂ emissions from a source given an FLM certification of no adverse impact – such a requirement would be logically inconsistent with the AQRV analysis which examines whether there would be any impacts at the proposed level of emissions, and would make that entire FLM certification process superfluous (since there would be no increased concentrations because they were all offset). Rather, as noted in one of the North Dakota FLM certifications, “in the case of a permit issued under a FLM certification of no adverse impact, the source must ... comply with an alternative set of PSD increments.”¹⁶²

¹⁶¹ See, e.g., *Aviall Services, Inc. v. Cooper Industries, Inc.*, 312 F.3d 677, 680 (5th Cir. 2002) (“Statutory construction begins with the plain language of a statute, but ‘plain’ does not always mean ‘indisputable’ or ‘pellucid.’ Consequently, sound interpretation reconciles the text of a disputed provision with the structure of the law of which it is a part; may draw strength from the history of enactment of the provision; and acknowledges the legislature’s general policies so that the interpretation does not become absurd.”).

The "cardinal rule" of statutory construction is that the "interpretation must be consistent with legislative intent and done in a manner which will accomplish the policy goals and objectives of the statutes." *Trinity Medical Center, Inc. v. Holum*, 544 N.W.2d 144, 152-53 (N.D. 1996); N.D.C.C. § 1-02-01. The interpretation of administrative regulations, like the interpretation of statutes, must be consistent with legislative intent and in furtherance of the policy goals and objectives expressed. *Heartview Foundation v. Glaser*, 361 N.W.2d 232, 235 (N.D. 1985).

¹⁶² 57 Fed. Reg. at 52789-90.

CAA § 165(d)(2)(C) specifically establishes a stepped up alternative Class I increment for facilities granted a FLM “no adverse impact” certification. CAA § 165(d)(2)(C)(iv), 42 U.S.C.A. § 7475(d)(2)(C)(iv); N.D. Admin. Code § 33-15-15-01(4)(j)(4)(b). This alternative increment applies to Little Knife and DGC, the facilities in North Dakota still operating under FLM certifications of no adverse impact.

A second part of the issue is whether the stepped up FLM certification of no adverse impact applies to facilities not granted a certification or variance. There is nothing in either CAA § 163(b)(1), 42 U.S.C.A. § 7473(b)(1), or CAA § 165(d)(2), 42 U.S.C.A. § 7475(d)(2), or its legislative history discussed in previous sections that support that interpretation. As noted above,¹⁶³ the variance procedure in CAA § 165(d)(2) has its origins in zoning and land use law. Just as a variance granted under a zoning ordinance applies only to the land and facility granted the variance, the variance granted to a source under CAA § 165(d) applies only to sources given a FLM certification or other variance. Further, the North Dakota FLM certifications themselves do not indicate that the variances were to apply to facilities other than those to which they were given.¹⁶⁴ Thus, the alternative Class I increments do not appear to apply to facilities not granted such certifications. In May, 2002, and in June, 2003, the North Dakota Department of Health held a PSD periodic review hearing under 40 C.F.R. § 51.166(a)(4) to address several issues, including refining the modeling analysis for PSD increment review, determining the role of monitoring data in PSD compliance, reviewing the adequacy of the State’s SIP, and determining whether the PSD increments were being violated by increment consuming sources in the state that have not been granted FLM certifications of no adverse impact.

Region 8’s interpretation of the *Alabama Power* dicta was criticized by counsel for one of the variance sources in one of its letters of comment to the Department as follows:

“The most obvious and apparent defect of this [Region 8’s analysis of the *Alabama Power* language discussed above] is that the passage cited makes reference to the “PSD maximum” not to the Class I increment. When a variance has been granted, the “PSD maximums” are the alternative maximum allowable increases contained in Section (165)(d)(2)(C)(iv) of the CAA. More fundamentally, the quotation from the *Alabama Power* case has been taken out of context. The court decided merely that the Act does contain authority to require protection of applicable increments. Its decision cannot be read to mean the maximum increases in section 165(d)(2)(C)(iv) do not apply to variance sources, as provided in the statute.”¹⁶⁵

As noted in this letter to the Department, the Class I, II, and III, and Class I alternate increments are all defined in essentially the same way. It would be unreasonable to construe the “maximum” language one way for the Class I increments, and another way for the alternate Class I increments. Compare CAA § 163(b)(1)¹⁶⁶ (defining the “Class I” increment as “the maximum allowable increase in concentrations of sulfur dioxide and particulate matter over the baseline concentration of such pollutants”); CAA § 163(b)(2)¹⁶⁷ (defining the “Class II” increment as “the maximum allowable increase in concentrations of sulfur dioxide and

¹⁶³ See footnotes 125-27 above and accompanying text.

¹⁶⁴ See section 2.4.2 above, and footnotes 73-112, for a discussion of the ND FLM certifications.

¹⁶⁵ September 7, 2001 letter from Basin Electric counsel Deb Levchak to ND Division of Air Quality Director Terry O’Clair, page 17, ND PSD Periodic Review Exhibit 17, HR page 1347.

¹⁶⁶ 42 U.S.C. § 7475(b)(1).

¹⁶⁷ 42 U.S.C. § 7475(b)(2).

particulate matter over the baseline concentration of such pollutants”); CAA § 163(b)(3)¹⁶⁸ (defining the “Class III” increment as “the maximum allowable increase in concentrations of sulfur dioxide and particulate matter over the baseline concentration of such pollutants”); CAA § 165(d)(2)(C)(iv)¹⁶⁹ (defining the alternate Class I FLM certification increment for “sulfur oxides and particulates” as the “maximum allowable increases over the baseline concentration for such pollutants”); and CAA § 165(d)(2)(D)(iii)¹⁷⁰ (defining the alternate Class I governor and presidential variance increment for “sulfur oxides” as the “maximum allowable increases over the baseline concentration for such pollutants”).

In sum, the “PSD maximum” that applies when a facility has been granted an FLM certification of no adverse impact is the “maximum” defined by that section of the law – CAA § 165(d)(2)(C)(iv). The language from *Alabama Power* cited by Region 8 in its February 1, 2000 letter does not support an interpretation of CAA § 165(d)(2)(C)(iv) that would require offsets from existing baseline and increment consuming sources.

4.0 Conclusion

The most reasonable construction of the PSD statutes, their legislative history, and their history of application in the North Dakota FLM certification proceedings discussed in section 2.4.2 above, is that SO₂ emissions from Little Knife and DGC consume increment against the alternative Class I increment under CAA § 165(d)(2)(C)(iv),¹⁷¹ and N.D. Admin. Code § 33-15-15-01(4)(j)(4)(b), but not against the Class I increment under CAA § 163(b)(1).¹⁷²

¹⁶⁸ 42 U.S.C. § 7475(b)(3).

¹⁶⁹ 42 U.S.C. § 7475(d)(2)(C)(iv).

¹⁷⁰ 42 U.S.C. § 7475(d)(2)(D)(iii).

¹⁷¹ 42 U.S.C.A. § 7475(d)(2)(C)(iv).

¹⁷² 42 U.S.C.A. § 7473(b)(1).